City of Auburn

Engineering Design and Construction Manual

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APPENDIX A-1. Site Development Application for DRT Submittal

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Case #: _____

City of Auburn

SITE DEVELOPMENT APPLICATION FOR DRT SUBMITTAL

ENGINEERING SERVICES DEPARTMENT
161 North Ross Street
Auburn, AL 36830
(334) 501-7390 ~ Fax: (334) 501-7294

Applicant Name: _____ Project Name: _____

Mailing Address: _____ Site Address: _____

_____ Phone Number: _____

Engineer's Email Address: _____

Please provide any additional email addresses below, for people who should be copied on the DRT comments letter:

_____

A COPY OF THE DEED TO THE SUBJECT PROPERTY MUST BE SUBMITTED WITH THIS APPLICATION. If the applicant is not the owner, then a letter allowing the applicant to act as an "authorized agent" must be on file. All associated fees will be charged to the applicant unless otherwise arranged.

General Location: _____

Gross Area of Subject Property: _____ Number of Individual Units (If residential): _____

Current Use: _____ Current Zoning District: _____

Proposed Use: _____

Is the proposed development to be on an existing lot of record? ☐ Yes ☐ No
Is the proposed development on a designated corridor? ☐ Yes ☐ No

Required Documents

For a complete list of the submittal requirements, see section 1.3.4 of the Engineering Design and Construction Manual.

DRT Submittals can be made online through the Auburn Permit Portal. The portal can be found at https://webgis.auburnalabama.org/permits.

For site development projects an approved site plan, approved engineering plans and an approved landscape plan (pursuant to regulations in Section 802.12) are required before release of the zoning certificate. Additionally, all erosion & sediment control measures and detention (if required) must be installed and approved prior to release of the zoning certificate.

I, the applicant, certify that all of the above facts are true and correct to the best of my knowledge. I understand that any development approval(s) granted pursuant to this application shall be subject to all applicable regulations of the City of Auburn, and that such approval(s) shall expire unless construction has commenced within eighteen (18) months following date of approval.

Applicant's Signature:	Date:
Applicant's Name (Please print):	

FOR OFFICE USE ONLY

Received By:	**Date:**
Submittal Approved? Yes ☐ No ☐	**Comment (if rejected):**
DRT Meeting Date:	

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APPENDIX A-2. Subdivision Application for DRT Submittal

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Case #: _____

City of Auburn

SUBDIVISION APPLICATION FOR DRT SUBMITTAL

ENGINEERING SERVICES DEPARTMENT
161 North Ross Street
Auburn, AL 36830
(334) 501-7390 ~ Fax: (334) 501-7294

Applicant Name: _____ Project Name: _____

Mailing Address: _____ Site Address: _____

_____ Phone Number: _____

Engineer's Email Address: _____

Please provide any additional email addresses below, for people who should be copied on the DRT comments letter:

_____

A COPY OF THE DEED TO THE SUBJECT PROPERTY MUST BE SUBMITTED WITH THIS APPLICATION. If the applicant is not the owner, then a letter allowing the applicant to act as an "authorized agent" must be on file. All associated fees will be charged to the applicant unless otherwise arranged.

General Location: _____

Gross Area of Subject Property: _____ Number of Individual Lots: _____

Current Zoning District: _____ Will this be developed as *Performance*? ☐ Yes ☐ No

Will this development require Lee County review? ☐ Yes ☐ No

Has a Preliminary Plat Been Approved? ☐ Yes ☐ No

Has the Preliminary Plat changed since it was approved by the Planning Commission? ☐ Yes ☐ No

If yes, describe the changes: _____

_____

Required Documents

For a complete list of the submittal requirements, see section 1.3.4 of the Engineering Design and Construction Manual.

DRT Submittals can be made online through the Auburn Permit Portal. The portal can be found at https://webgis.auburnalabama.org/permits.

I, the applicant, certify that all of the above facts are true and correct to the best of my knowledge. I understand that any development approval(s) granted pursuant to this application shall be subject to all applicable regulations of the City of Auburn, and that such approval(s) shall expire unless construction has commenced within eighteen (18) months following date of approval.

Applicant's Signature:	Date:
Applicant's Name (Please print):	

FOR OFFICE USE ONLY

Received By:	**Date:**
Submittal Approved? Yes ☐ No ☐	**Comment (if rejected):**
DRT Meeting Date:	

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APPENDIX B-1. Site Development Plans Engineering Checklist

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DRT Checklist for *Site Development* Construction Plans

Project Name: _____ **DRT Case No:** _____

This checklist must be submitted with every set of engineering construction plans for site developents (conditional & permitted use projects). All items on the checklist shall be addressed. If the item is not applicable to this project check the box next to the item labeled "N/A", and provide comment. Items preceded by an asterisk (*) are required for the submittal to be considered complete. If one of these items is missing from the submittal without a valid explanation, the entire submittal will be rejected. Note that this checklist is not intended to be all-inclusive, and fulfillment of this checklist does not alleviate the obligation of the designer to meet all City of Auburn code, regulations, ordinances, and specifications. The purpose of this checklist is to facilitate a more efficient plan review process for the designer and the review team.

	Description	Check	N/A	Comments
	Required Plan Sheets			
	These are the basic sheets we expect to see in a set of plans. Some sheets may be combined on certain projects, or have different names (for example, water and sewer shown on one utility plan sheet for small projects).			
*	Title/Cover Sheet			
*	Project Notes			
*	Existing Conditions/Demo Plan			
*	Site Plan (engineering)			
*	Water Plan			
*	Sanitary Sewer Plan			
*	Sanitary Sewer Profiles (for public infrastructure)			
*	Grading & Drainage Plan			
*	Storm Sewer Profiles (for public infrastructure)			
*	Erosion & Sediment Control Plan (typically 3 phases)			
*	Street Plan & Profiles (for public infrastrucutre)			
*	Miscellaneous Details, Cross-sections & Other Sheets			
*	City of Auburn Standard Details			
	Title Sheet			
TITLE SHEET - TITLE SHEE	Project Title			
	Permit Numbers (USACE & ADEM)			
	Relevant Contact Information			
	Sheet Index			
	Vicinity Map (legible)			
	Engineer's Seal			
	Project Notes			
NOTES	Verify that project notes do not conflict with City of Auburn specifications			
	Provide Legend			
	Existing Conditions / Demo Plan			
DEMO---DEMO---DEMO---DEMO---D	Include North arrow			
	Show locations of existing structures			
	Indicate if structures are being removed			
	Show existing topography with clearly labeled contours lines			
	Minimum 2ft contour intervals with every 10ft line labeled			
	Show existing water features including wetland areas			
	Show existing easements and right-of-ways			
	Show existing utilities			
	Indicate if being removed/abandoned			
	Show all property lines			
	Show the limits of clearing & grubbing			
	Site Plan (engineering)			
SITE PLAN - SITE PLAN	Show property lines, building layout, pavement, traffic/parking striping, traffic signs, etc.			
	Indicate parking dimensions, lane widths, and corner radii			
	Show dumpster location			
	Verfiy Planning Commission resolutions have been met for Conditional Uses			
	Water Plans			
W------W------W------W------V	*Required water service submittals prior to or with plan submittal:			
	Development Application for Water and Sewer Service			
	Backflow Protection Information Sheet			
	Fire flow calculations, when applicable (coordinate with WRM Department)			
	Include North arrow			
	If water layout requires multiple pages, include an overall plan sheet			

Description	Check	N/A	Comments
The following **existing** water infrastructure should be shown:			
Location, size, and material of all water mains and service lines			
Location and size of all water meters			
Location of the nearest main line valves for isolation of the site			
Location of the nearest fire hydrants			
Location of all blow-off valves and air release valves			
The following **proposed** water infrastructure should be shown:			
Location, size, and material of all water mains and service lines			
Location and size of all water meters (place at edge of ROW or easement)			
Location of all isolation valves, blow-off valves, and air release valves			
Location of all fire hydrants			
Location of FDC within 125 ft of a fire hydrant			
Location of all backflow prevention devices, and vaults			
Location of all bends, tees, and fittings (specify type and degree)			
Location and detail of all necessary thrust restraint			
Location of vault drain to grade or to storm sewer			
Show all existing and proposed easements			
Provide a general layout of other utilities (existing and proposed)			
Clearly differentiate between existing and proposed utilities			
Detail all main line connections. Show tap configuration and fittings.			
Provide backflow prevention for all main line connections			
Provide estimated static pressure (normally 820 - FFE / 2.31)			
Use pressure reducing valves where static pressure > 70 psi			
Size pipes to maintain a velocity not to exceed 10 ft/sec			
Provide minimum cover of 30 inches for lines 8 inches and smaller			
Provide minimum cover of 36 inches for lines larger than 8 inches			
Provide minimum 18 inches vertical separation where water & sewer cross			
Provide minimum 10 feet horizontal separation between water & sewer lines			
Provide sprinkler count			
Provide the following notes where applicable:			
"Existing services to be abandoned shall be terminated at the main."			
"Notify AWWB of any scheduled outages 7 days prior to the outage."			
"Only AWWB personnel are authorized to operate AWWB valves."			
Sanitary Sewer Plans			
*Required sewer service submittals prior to or with plan submittal:			
Development Application for Water and Sewer Service			
Grease Trap Sizing Worksheet			
Approved pump station design (coordinate with the WRM Department)			
Include North arrow			
If sewer layout requires multiple pages, include an overall plan sheet			
Show all existing and proposed easements			
Provide a general layout of other utilities (existing and proposed)			
The following **existing** sewer infrastructure should be shown:			
Location of all manholes with rim, and all invert elevations provided			
Location, sizes, materials, and slopes of all sewer mains and laterals			
Location, and size of grease traps and/or oil & grit separators			
The following **proposed** sewer infrastructure should be shown:			
Location of all manholes with rim, and all invert elevations provided			
Location, sizes, materials, and slopes of all sewer mains and laterals			
Location and size of grease traps where required			
Location and size of oil & grit separators where required			
Location of cleanouts at the edge of ROW or easement			
Clearly differentiate between existing and proposed utilities			
Label all manholes and pipes (correspond with labels on profile sheets)			
Provide contours or specify finish floor elevations			
Indicate how existing sewer mains or services are to be abandoned			
Manholes shall be locked down if less than 1 foot above the 100-yr BFE			
Public sanitary sewer main requirements:			
Manholes shall be located in the center of the street where possible			
Design sewer lines for maximum capacity at half full			
DIP required where cover is greater than 12 feet or less than 3 feet			
DIP required where less than 2 feet of clearance between utilities			
DIP required within the 100-yr BFE or where bouyancy is a concern			

Description	Check	N/A	Comments
Provide consistent pipe material between manholes			
Minimum slope requirements:			
4"=2%, 6"=1%, 8"=0.60%, 10"=0.35%, 12"=0.30%			
Provide a minimum 0.10' drop across all straight through manholes			
Provide a minimum 0.25' drop across all turning manholes			
Manhole spacing should not exceed 400 feet			
Services tied into mains shall have a 3 feet minimum separation			
Service lines should connect to manholes where possible			
Use standard 4 inch drop for service lines into manholes			
Service lines angled against the flow use a minimum 6 inch drop			
If angle against the flow >135 degrees connect lateral directly to main			
No more than four laterals connected to a pass through manhole			
No more than five laterals connected to a beginning manhole			
Cleanouts to be located in traffic rated enclosure in paved areas			
Backflow prevention is required when any sewered portion of a building is less than 12 inches above the rim elevation of the nearest **upstream** manhole.			
Such lots shall be identified on the plans and the plat.			
Sanitary Sewer Pipe Profiles			
Indicate pipe material, size, slope and length			
Show all utility crossings			
Show existing and proposed grades			
Show all rim and invert elevations			
Show outside drop manhole where drop is 2 feet or greater			
Label all manholes and pipes (correspond with labels on plan sheets)			
Show existing mains and structures at all connection points			
Clearly differentiate between existing and proposed utilities			
Clearly differentiate between material types			
Grading & Drainage Plans			
Include North arrow			
If plans require multiple pages, include at least one overall plan sheet			
Show existing topographic contours			
Maximum 2ft contour intervals with every 10ft line labeled			
Used lighter or dashed line type for existing contour lines			
Show proposed contours			
Maximum 2ft contour intervals with every 10ft line labeled			
Proposed contour lines shoud tie-in to existing contour lines			
Show streams and other water features			
Show stream & wetland buffers			
Show 100-yr flood plain boundaries			
Indicate minimum FFE's for lots adjacent to water features			
Show all existing structures, utilities, and easements that will remain			
Show mitigation areas			
Indicate steep slopes (City of Auburn Zoning Ordinance)			
Show curb & gutter (2ft City of Auburn Std. C&G)			
Show all storm water inlets			
Max access spacing 500ft for 15in to 48in pipe (for public infrastrcture)			
Max access spacing 800ft for 54in or greater (for public infrastructure)			
Double-wing inlets only used in sags (for public infrastructure)			
Show all proposed culverts			
Indicate type and dimensions			
Show headwalls and energy dissipaters			
Show all storm sewer pipe			
Show headwalls at discharge points			
Show all manholes and junction boxes			
Extend discharge points at least 10 ft beyond building lines			
Show rip-rap or other energy dissipators at discharge points			
Show all proposed drainage & utility easement			
Show detention system(s)			
Fencing required around ponds for slopes steeper than 3:1			
Pipes discharge at bottom of pond slopes			
Show outlet structure(s)			
Storm Water Pipe Profiles (for public infrastructure only)			
Indicate pipe size, material, slope and length			

	Description	Check	N/A	Comments
SD PROFILES SD PROFI	Pipe beneath streets shall be RCP			
	Show rim & invert elevations			
	Show 25-yr Hydraulic Grade Line			
	Show existing and proposed grades			
	Show all other utility crossings			
	Show existing pipe & structures at tie-ins			
Erosion & Sediment Control Plans				
ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---	Used a phased plan when applicable			
	Show clearing limits			
	Show stream & wetland buffers. Drainage basin of stream should be delineated from the commencement point of the stream, to the point that it leaves the property. Basin area determines buffer widths (see ZO)			
	Provide an ES&C legend			
	Identify project sign location and provide on-site project rain gauge			
	Silt fencing shall be Class "A" (wire reinforced, metal staked, trenched), C-POP, or approved equal.			
	Construction Entrance Pad (min 20ft x 50ft) Use #1 stone with geotextile fabric underneath. One CEP per site at any given time.			
	Hay bales may not be used as stand-alone inlet protection. They can be used in conjunction with silt fence, silt savers, etc			
	Use rock check dams, wattles, or silt fence check dams (rather than hay bales) where applicable.			
	Design and show outlet protection at all discharges			
	Show curb inlet protection devices (no stand-alone hay bales)			
	Slopes greater than 3:1 require erosion control blankets. Specify types of blankets being used.			
	Show all sediment basin locations, filter structures, and sediment volumes			
	*Submit sediment storage calculations			
	Attach City of Auburn standard erosion & sedimentation ctrl. details			
	Water Quality Forms Submittted			
	Low Impact Development/Green Infrastructure Forms Submitted			
	Include the following notes on the E&SC Plans[1]			
Street Plan & Profiles (for public infrastructure only)				
PLAN & PROFILE / PLAN & PROFILE / PLAN & PROFILE / PLAN & PROFILE / PLAN & PROF	**Plan view**			
	Include North arrow			
	Show existing and proposed topography			
	Show edge of pavement and curb/gutter			
	Show ROW & easements			
	Show station line			
	Show horizontal curve radii			
	Show deceleration lane storage, taper, and transition lengths			
	Indicate tangent lengths (minimum 100ft between curves)			
	Indicate street width (b/c to b/c)			
	Indicate intersection corner property line radii (minimum 20ft)			
	Show proposed sidewalks			
	Profile View			
	Show existing and proposed centerline grades			
	Max grade for local streets = 15%			
	Max grade for collector streets = 12%			
	Max grade for minor arterial = 8%			
	Max grade = 5% within 100ft of intersection			
	Show vertical alignment with all vertical curve data			
	Indicate the design speed used (see Engineering Design & Const. Manual)			
	Align stationing with the plan view station line			
Miscellaneous Details, Cross-sections, & Other Sheets				
MISC --- MISC --- MISC --- MISC --- MISC	Collector or arterial (or other special) striping			
	Show details for improvements to off-site infrastructure			
	Turn lanes - including buildup and striping (meet with City on widening)			
	Off-site sewer, water, or storm water improvements			
	Detention outlet control structure details			
	Culvert details			
	HDPE installation details (for public infrastrucutre)			
	Tail ditch and/or swale details			

	Description	Check	N/A	Comments
MISC ---	Traffic control plan and detour plan			
MISC ---	Proposed street classifications & buildups (for public infrastrucutre)			
City of Auburn Standard Details				
	Include all relevant City of Auburn standard details with the final plans			
Miscellaneous Design & Submittal Requirements				
MISC ---	The following shall be included with the initial DRT submittal, when applicable:			
MISC ---	1. Electrical plans for required pedestrian lighting			
MISC ---	2. Traffic Impact Study			
MISC ---	3. Sight distance analyses			
MISC ---	4. Design standards waiver requests			
MISC ---	No trees shall be within 10ft of center lines of utilities			
MISC ---	The following note should be added to all utility plans and plats[2]			
MISC ---	Easements shall be the greater of 20ft or 2 times the depth to the bottom of the utility. Easement widths shall be in increments of 10ft.			
MISC ---	Slope and grades of easements shall be passable by vehicles (maximum easement cross slope of 4:1)			
MISC ---	All topography should be relative to MSL (no assumed datum)			
MISC ---	Utility stub outs for future development should be placed in easements extending to the edge of the property line			
MISC ---	There are no points of storm water discharge from the property that exceed the pre-develoment conditions at those points			

[1]
a. Any area that has been disturbed and will remain so for more than 13 days shall be seeded and mulched within 5 days of being disturbed.
b. Additional BMPs may be required by the QCP and/or City of Auburn over the course of the project to minimize sediment release from the site.
c. All BMPs shall be designed and installed in accordance with the Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas and the City of Auburn standard erosion and sediment control details.
d. The use of floc-blocks, polyacrylamide (PAM), or other settling enhancement materials may be required by the QCP or City of Auburn during the course of construction to minimize turbidity and sediment release from the site.
e. Remove all temporary BMPs upon submittal of Notice Of Termination to ADEM.

[2]
a. No permanent structures may be constructed or placed on easements.
b. Fences may be erected perpendicularly across the easement provided there is a minimum 12-foot wide access gate installed. If the gate is to be locked there must be a City-approved lock installed in conjunction with the owners lock.
c. No canopy trees shall be planted within 10 feet of public water or sewer lines.

SIGNED: _____
(engineer of record)

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APPENDIX B-2. Subdivision Construction Plans Engineering Checklist

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DRT Checklist for *Subdivision* Construction Plans

Project Name: _____ **DRT Case No:** _____

City of Auburn

This checklist must be submitted with every set of engineering construction plans for subdivision improvements. All items on the checklist shall be addressed. If the item is not applicable to this project check the box next to the item labeled "N/A", and provide comment. Items preceded by an asterisk (*) are required for the submittal to be considered complete. If one of these items is missing from the submittal without a valid explanation, the entire submittal will be rejected. Note that this checklist is not intended to be all-inclusive, and fulfillment of this checklist does not alleviate the obligation of the designer to meet all City of Auburn code, regulations, ordinances, and specifications. The purpose of this checklist is to facilitate a more efficient plan review process for the designer and the review team.

	Description	Check	N/A	Comments
	Required Plan Sheets			
	These are the basic sheets we expect to see in a set of plans. Some sheets may be combined on certain projects, or have different names (for example, storm water profiles shown on the street plan & profile sheets).			
*	Title/Cover Sheet			
*	Project Notes			
*	Existing Conditions/Demo Plan			
*	Preliminary Plat			
*	Water Plan			
*	Sanitary Sewer Plan			
*	Sanitary Sewer Profiles			
*	Grading & Drainage Plan			
*	Storm Sewer Profiles			
*	Erosion & Sediment Control Plan (typically 3 phases)			
*	Street Plan & Profiles			
*	Miscellaneous Details, Cross-sections & Other Sheets			
*	City of Auburn Standard Details			
	Title Sheet			
TITLE SHEET - TITLE SHEE	Project Title			
	Permit Numbers (USACE & ADEM)			
	Relevant Contact Information			
	Sheet Index			
	Vicinity Map (legible)			
	Engineer's Seal			
	Project Notes			
NOTES	Verify that project notes do not conflict with City of Auburn specifications			
	Provide Legend			
	Existing Conditions / Demo Plan			
DEMO---DEMO---DEMO---DEMO---DEMO---DI	Include North arrow			
	Show locations of existing structures			
	Indicate if structures are being removed			
	Show existing topography with clearly labeled contours lines			
	Minimum 2ft contour intervals with every 10ft line labeled			
	Show existing water features including wetland areas			
	Show existing easements and right-of-ways			
	Show existing utilities			
	Indicate if being removed/abandoned			
	Show all property lines			
	Show the limits of clearing & grubbing			
	Preliminary Plat			
PLAT - PLAT -	Include a copy of the approved Preliminary Plat			
	Indicate any changes from the approved plat			
	Verify planning commission resolutions were addressed			
	Water Plans			
W-------W-------W-------W-------W--	*Required water service submittals prior to or with plan submittal:			
	Development Application for Water and Sewer Service			
	Backflow Protection Information Sheet			
	Fire flow calculations, when applicable (coordinate with WRM Department)			
	Include North arrow			
	If water layout requires multiple pages, include an overall plan sheet			
	The following **existing** water infrastructure should be shown:			
	Location, size, and material of all water mains and service lines			
	Location and size of all water meters			

Description	Check	N/A	Comments
Location of the nearest main line valves for isolation of the site			
Location of the nearest fire hydrants			
Location of all blow-off valves and air release valves			
The following **proposed** water infrastructure should be shown:			
Location, size, and material of all water mains and service lines			
Location and size of all water meters (place at edge of ROW or easement)			
Location of all isolation valves, blow-off valves, and air release valves			
Location of all fire hydrants			
Location of FDC within 125 ft of a fire hydrant			
Location of all backflow prevention devices, and vaults			
Location of all bends, tees, and fittings (specify type and degree)			
Location and detail of all necessary thrust restraint			
Location of vault drain to grade or to storm sewer			
Show all existing and proposed easements			
Provide a general layout of other utilities (existing and proposed)			
Clearly differentiate between existing and proposed utilities			
Detail all main line connections. Show tap configuration and fittings.			
Provide backflow prevention for all main line connections			
Provide estimated static pressure (normally 820 - FFE / 2.31)			
Use pressure reducing valves where static pressure > 70 psi			
Size pipes to maintain a velocity not to exceed 10 ft/sec			
Provide minimum cover of 30 inches for lines 8 inches and smaller			
Provide minimum cover of 36 inches for lines larger than 8 inches			
Provide minimum 18 inches vertical separation where water & sewer cross			
Provide minimum 10 feet horizontal separation between water & sewer lines			
Provide sprinkler count			
Provide the following notes where applicable:			
"Existing services to be abandoned shall be terminated at the main."			
"Notify AWWB of any scheduled outages 7 days prior to the outage."			
"Only AWWB personnel are authorized to operate AWWB valves."			
Sanitary Sewer Plans			
*Required sewer service submittals prior to or with plan submittal:			
Development Application for Water and Sewer Service			
Grease Trap Sizing Worksheet			
Approved pump station design (coordinated with the WRM Department)			
Include North arrow			
The following **existing** sewer infrastructure should be shown:			
Location of all manholes with rim, and all invert elevations provided			
Location, sizes, materials, and slopes of all sewer mains and laterals			
Location, and size of grease traps and/or oil & grit separators			
The following **proposed** sewer infrastructure should be shown:			
Location of all manholes with rim, and all invert elevations provided			
Location, sizes, materials, and slopes of all sewer mains and laterals			
Location and size of grease traps where required			
Location and size of oil & grit separators where required			
Location of cleanouts at the edge of ROW or easement			
If sewer layout requires multiple pages, include an overall plan sheet			
Show all existing and proposed easements			
Provide a general layout of other utilities (existing and proposed)			
Clearly differentiate between existing and proposed utilities			
Label all manholes and pipes (correspond with labels on profile sheets)			
Provide contours or specify finish floor elevations			
Indicate how existing sewer mains or services are to be abandoned			
Manholes shall be locked down if less than 1 foot above the 100-yr BFE			
Public sanitary sewer main requirements:			
Manholes shall be located in the center of the street where possible			
Design sewer lines for maximum capacity at half full			
DIP required where cover is greater than 12 feet or less than 3 feet			
DIP required where less than 2 feet of clearance between utilities			
DIP required within the 100-yr BFE or where bouyancy is a concern			
Provide consistent pipe material between manholes			
Minimum slope requirements:			

Description	Check	N/A	Comments
4"=2%, 6"=1%, 8"=0.60%, 10"=0.35%, 12"=0.30%			
Provide a minimum 0.10' drop across all straight through manholes			
Provide a minimum 0.25' drop across all turning manholes			
Manhole spacing should not exceed 400 feet			
Services tied into mains shall have a 3 feet minimum separation			
Service lines should connect to manholes where possible			
Use standard 4 inch drop for service lines into manholes			
Service lines angled against the flow use a minimum 6 inch drop			
If angle against the flow >135 degrees connect lateral directly to main			
No more than four laterals connected to a pass through manhole			
No more than five laterals connected to a beginning manhole			
Cleanouts to be located in traffic rated enclosure in paved areas			
Backflow prevention is required when any sewered portion of a building is less than 12 inches above the rim elevation of the nearest **upstream** manhole. Such lots shall be identified on the plans and the plat.			
Sanitary Sewer Pipe Profiles			
Indicate pipe material, size, slope and length			
Show all utility crossings			
Show existing and proposed grades			
Show all rim and invert elevations			
Show outside drop manhole where drop is 2 feet or greater			
Label all manholes and pipes (correspond with labels on plan sheets)			
Show existing mains and structures at all connection points			
Clearly differentiate between existing and proposed utilities			
Clearly differentiate between material types			
Grading & Drainage Plans			
Include North arrow			
If plans require multiple pages, include at least one overall plan sheet			
Show existing topographic contours			
Maximum 2ft contour intervals with every 10ft line labeled			
Used lighter or dashed line type for existing contour lines			
Show proposed contours			
Maximum 2ft contour intervals with every 10ft line labeled			
Proposed contour lines shoud tie-in to existing contour lines			
Show streams and other water features			
Show stream & wetland buffers			
Show 100-yr flood plain boundaries			
Indicate minimum FFE's for lots adjacent to water features			
Show all existing structures, utilities, and easements that will remain			
Show mitigation areas			
Indicate steep slopes (City of Auburn Zoning Ordinance)			
Show curb & gutter (2ft City of Auburn Std. C&G)			
Show all storm water inlets			
Max access spacing 500ft for 15in to 48in pipe (for public infrastrcture)			
Max access spacing 800ft for 54in or greater (for public infrastructure)			
Double-wing inlets only used in sags (for public infrastructure)			
Show all proposed culverts			
Indicate type and dimensions			
Show headwalls and energy dissipaters			
Show all storm sewer pipe			
Show headwalls at discharge points			
Show all manholes and junction boxes			
Extend discharge points at least 10 ft beyond building lines			
Show rip-rap or other energy dissipators at discharge points			
Show all proposed drainage & utility easement			
Show detention system(s)			
Fencing required around ponds for slopes steeper than 3:1			
Pipes discharge at bottom of pond slopes			
Show outlet structure(s)			
Storm Water Pipe Profiles (for public infrastructure only)			
Indicate pipe size, material, slope and length			
Pipe beneath streets shall be RCP			

	Description	Check	N/A	Comments
SD PROFILES SD PR	Show rim & invert elevations			
	Show 25-yr Hydraulic Grade Line			
	Show existing and proposed grades			
	Show all other utility crossings			
	Show existing pipe & structures at tie-ins			
Erosion & Sediment Control Plans				
ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---ESC---	Used a phased plan when applicable			
	Show clearing limits			
	Show stream & wetland buffers. Drainage basin of stream should be delineated from the commencement point of the stream, to the point that it leaves the property. Basin area determines buffer widths (see ZO)			
	Provide an ES&C legend			
	Identify project sign location and provide project rain gauge on site			
	All silt fencing shall be Class "A" (wire reinforced, metal staked, trenched), C-POP, or approved equal			
	Construction Entrance Pad (min 20ft x 50ft) Use #1 stone with geotextile fabric underneath. One CEP per site at any given time.			
	Hay bales may not be used as stand-alone inlet protection. They can be used in conjunction with silt fence, silt savers, etc			
	Use rock check dams, wattles, or silt fence check dams (rather than hay bales) where applicable.			
	Design and show outlet protection at all discharges			
	Show curb inlet protection devices (no stand-alone hay bales)			
	Slopes greater than 3:1 require erosion control blankets. Specify types of blankets being used.			
	Show all sediment basin locations, filter structures, and sediment volumes			
	*Submit sediment storage calculations			
	Attach City of Auburn standard erosion & sedimentation ctrl. details			
	Water Quality Forms Submittted			
	Low Impact Development/Green Infrastructure Forms Submitted			
	Include the following notes on the E&SC Plans[1]			
Street Plan & Profiles (for public infrastructure only)				
PLAN & PROFILE / PLAN & PROFILE / PLAN & PROFILE / PLAN & PROFILE / PLAN & PROFILE / PLAN & PR	**Plan view**			
	Include North arrow			
	Show existing and proposed topography			
	Show edge of pavement and curb/gutter			
	Show ROW & easements			
	Show station line			
	Show horizontal curve radii			
	Show deceleration lane storage, taper, and transition lengths			
	Indicate tangent lengths (minimum 100ft between curves)			
	Indicate street width (b/c to b/c)			
	Indicate intersection corner property line radii (minimum 20ft)			
	Show proposed sidewalks			
	Profile View			
	Show existing and proposed centerline grades			
	Max grade for local streets = 15%			
	Max grade for collector streets = 12%			
	Max grade for minor arterial = 8%			
	Max grade = 5% within 100ft of intersection			
	Show vertical alignment with all vertical curve data			
	Indicate the design speed used (see Engineering Design & Const. Manual)			
	Align stationing with the plan view station line			
Miscellaneous Details, Cross-sections, & Other Sheets				
MISC --- MISC --- MISC --- MISC --- MISC -	Collector or arterial (or other special) striping			
	Show details for improvements to off-site infrastructure			
	Turn lanes - including buildup and striping (meet with City on widening)			
	Off-site sewer, water, or storm water improvements			
	Detention outlet control structure details			
	Culvert details			
	HDPE installation details (for public infrastructure)			
	Tail ditch and/or swale details			

	Description	Check	N/A	Comments
MISC ---	Traffic control plan and detour plan			
	Proposed street classifications & buildups (for public infrastructure)			
City of Auburn Standard Details				
	Include all relevant City of Auburn standard details with the final plans			
Miscellaneous Design & Submittal Requirements				
MISC --- MISC --- MISC --- MISC --- MISC --- MISC --- MISC	The following shall be included with the initial DRT submittal, when applicable:			
	1. Electrical plans for required pedestrian lighting			
	2. Traffic Impact Study			
	3. Sight distance analyses			
	4. Design standards waiver requests			
	No trees shall be within 10ft of center lines of utilities			
	The following note should be added to all utility plans and plats[2]			
	Easements shall be the greater of 20ft or 2 times the depth to the bottom of the utility. Easement widths shall be in increments of 10ft.			
	Slope and grades of easements shall be passable by vehicles (maximum easement cross slope of 4:1)			
	All topography should be relative to MSL (no assumed datum)			
	Utility stub outs for future development should be placed in easements extending to the edge of the property line			
	There are no points of storm water discharge from the property that exceed the pre-develoment conditions at those points			

[1]

a. Any area that has been disturbed and will remain so for more than 13 days shall be seeded and mulched within 5 days of being disturbed.
b. Additional BMPs may be required by the QCP and/or City of Auburn over the course of the project to minimize sediment release from the site.
c. All BMPs shall be designed and installed in accordance with the Alabama Handbook for Erosion Control, Sediment Control, and Stormwater Management on Construction Sites and Urban Areas and the City of Auburn standard erosion and sediment control details.
d. The use of floc-blocks, polyacrylamide (PAM), or other settling enhancement materials may be required by the QCP or City of Auburn during the course of construction to minimize turbidity and sediment release from the site.
e. Remove all temporary BMPs upon submittal of Notice Of Termination to ADEM.
f. Any dewatering operation must be properly filtered prior to discharge.

[2]

a. No permanent structures may be constructed or placed on easements.
b. Fences may be erected perpendicularly across the easement provided there is a minimum 12-foot wide access gate installed. If the gate is to be locked there must be a City-approved lock installed in conjunction with the owners lock.
c. No canopy trees shall be planted within 10 feet of public water or sewer lines.

SIGNED: ____

(engineer of record)

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APPENDIX B-3. Site Plan Sufficiency Checklist

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City of Auburn

SITE PLAN SUFFICIENY CHECKLIST
PLANNING DEPARTMENT
FOR THE DEVELOPMENT REVIEW TEAM SUBMITTAL

Case #_____

Please check boxes to indicate the required item has been addressed or mark "N/A", if appropriate.

REQUIRED

Table format:		**Graphic information:**	
	Zoning and Current Land Use of adjacent properties		**Vicinity map**, north arrow, seal, (Name, address & Phone number of surveyor), date prepared and graphic scale
	Impervious surface area in square feet, Impervious surface ratio (calculated) Maximum and proposed		**Certified boundary survey** of the tract prepared by a registered surveyor, indicating an existing lot of record
	Floor area in square feet, Floor area ratio (calculated) Maximum and proposed		Location, height and **dimensions of all structures**
	Number of floors or stories, **height** of all structures		Location of all **impervious surfaces**
	Type(s) of **bufferyard** required, if any, Along each property boundary and width		Location and dimensions of all required **bufferyards**
	Number of **parking spaces** Required and proposed (calculated) based on Section 502 or 509 requirements		Areas of **general landscaping** pursuant to Section 426 / Areas of **landscaping for off-street parking areas** pursuant to Sections 426 and 433
	Corridor Overlay Information where applicable (building materials, sign, lighting etc) *Site plans subject to Corridor Overlay requirements must submit **elevations**		Locations and dimensions of all **parking spaces, loading berths, and driveway aisles**. One-way aisles must be labeled as such
			Location of all **curb cuts** and their **distances from nearest adjacent curb cuts or street intersections**
			Phase lines, if the development is to be constructed in phases
			Location and screening of **solid waste receptacles**

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APPENDIX B-4. Drainage Checklist

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City of Auburn

Stormwater Drainage Checklist

Engineering Services Department
161 North Ross Street
Auburn, Alabama 36830 (334) 501-7390 FAX (334) 501-7294
https://www.auburnalabama.org/engineering-services/

This checklist shall be submitted as part of the DRT submittal package for all projects that require stormwater detention. It shall be included as the first page of the drainage report, and be signed/sealed by an engineer registered in the state of Alabama.

Description	Checked	N/A	Comments
Drainage report stamped by AL engineer			
Description of existing drainage conditions, including existing infrastructure, land use, wetlands, floodplains, etc., included in report			
Basin maps included for pre- and post-development conditions			
Sub-basins & outfalls clearly identified on basin maps			
Post-development rate of discharge does not exceed pre-development discharge rate at all analysis points			
Post-development routing summary presented in tabular format			
Pre-Development Conditions worksheet included for each sub-basin			
Post-Development Conditions worksheet included for each analysis point			
Point of Analysis Peak Discharge Summary table included			
Total Peak Discharge Summary table included			
Gutter Spread Table completed and included			
Pipe Design Table completed and included			
Hydraulic grade line shown on pipe profiles and/or swale cross-sections			
“No adverse impact” statement (for downstream infrastructure) included in report			

Project Name: _____

Date: _____

Engineer’s Signature: _____ Engineer’s Seal:

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Gutter Spread Table

Inlet ID	Gutter Flow (cfs)	Roadway Slope at Inlet (%)	Spread @ Inlet (ft)	Inlet Efficiency (%)	Bypass Flow (cfs)	Inlet ID Accepting Bypass

Pipe Design Table

Pipe ID	Pipe Size (in)	Pipe Slope (%)	Pipe Flow (cfs)	Full Flow Capacity (cfs)	Full Flow Velocity (fps)	Design Velocity (fps)

PRE-DEVELOPMENT CONDITIONS

Project Name: _____

Total Project Area (acres): _____

Comparison Point Name/Number: _____

Basin/Sub-Basin Area (acres): _____

	2 year storm	5 year storm	10 year storm	25 year storm	100 year storm
Curve Number or Runoff Coefficient					
Time of Concentration (min)					
Peak Flow (cfs)					

1- Use separate sheet for each comparison point that is used for stormwater calculations
2- Provide documentation for composite curve numbers or runoff coefficients
3- Provide documentation for time of concentration calculations
4- Provide documentation on calcualtions and method used to determine peak flow

Revised November 2011

POST-DEVELOPMENT CONDITIONS

Project Name: _____

Total Project Area (acres): _____

Comparison Point Name/Number: _____

Basin/Sub-Basin Area (acres): _____

Receiving Facility/Pond: _____

	2 year storm	5 year storm	10 year storm	25 year storm	100 year storm
Curve Number or Runoff Coefficient					
Time of Concentration (min)					
Peak Flow (cfs)					

1- Use separate sheet for each comparison point that is used for stormwater calculations
2- Indicate name of detention pond receiving runoff or bypass as appropriate
3- Provide documentation for composite curve numbers or runoff coefficients
4- Provide documentation for time of concentration calculations
5- Provide documentation on calcualtions and method used to determine peak flow

Revised November 2011

COMPARISON POINT PEAK DISCHARGE SUMMARY

Project Name: _____

Comparison Point Name/Number: _____

Return Period	Pre- Development Flow (Q cfs)	Post-Development Flow (Q cfs)	Delta Q (cfs)	% Increase (Q)
2				
5				
10				
25				
100				

Revised November 2011

TOTAL PEAK DISCHARGE SUMMARY

Project Name: _____

Return Period	Pre- Development Flow (Q cfs)	Post-Development Flow (Q cfs)	Delta Q (cfs)	% Increase (Q)
2				
5				
10				
25				
100				

Revised November 2011

APPENDIX B-5. Signature Bond for Development

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STATE OF ALABAMA

LEE COUNTY

City of Auburn

Signature Bond for Development

KNOW ALL MEN BY THESE PRESENTS, THAT WE _____ (hereinafter called the Principal) having received approval from the City of Auburn to construct the development know as _____ , are held firmly unto the City of Auburn, Alabama (hereinafter called the Obligee), in full and just sum of the complete cost to repair or replace any and all infrastructure removed or damaged or displaced in the event we are unable to complete the project within a reasonable amount of time or if we declare bankruptcy or insolvency before completing the project.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if Principal shall promptly and faithfully construct the improvements in accordance with the approved construction plans which are made a part hereof by reference as if set out in here full, and said construction approved by Obligee, within a reasonable amount of time, then this agreement shall be null and void; otherwise to remain in full force and effect.

This agreement shall be binding on ourselves, our heirs, administrators, executors and assigns, jointly and severally and shall run with the land, firmly by these presents.

SIGNED, SEALED, AND DELIVERED THIS _____ day of _____ , _____

_____
OWNER

_____
Owner's Agent

_____
Witness to Agent's Signature:

_____
Address

(Seal)

_____
City, State

ATTEST:

_____
Telephone Number

Note: This document must be filed in the Probate record after execution.

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APPENDIX C. Hold Harmless Agreement

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INDEMNITY AND HOLD HARMLESS AGREEMENT

STATE OF ALABAMA

LEE COUNTY

WHEREAS, the City of Auburn, Alabama (hereinafter the "City") has a drainage and utility easement located along _____ _____ in Auburn, Alabama, and
(Right of way or location description)

WHEREAS, _____ (hereinafter the "Owner") of property described as _____ _____, Auburn, Alabama, wishes to locate _____ (hereinafter the "Obstruction") on the City's drainage and utility easement (shown by Exhibit A attached), and as a condition and obligation to the City for the granting of its consent to the Obstruction, the Owner, for itself and its successors in the ownership of the property on which Obstruction is located, has agreed to indemnify and hold harmless the City and holders of any interest in the easement where the Obstruction is located.

NOW, THEREFORE, in consideration of the granting of the consent of the undersigned to the placement of the Obstruction on and under the drainage and utility easement, the Owner does, for itself and its successors in the ownership of the property described, agree to indemnify, hold harmless and defend the City, its officials, representatives, agents, servants and employees from and against all liability and loss which the City and the holders of the interest in the drainage and utility easement on which the Obstruction is located may sustain as the result of claims, demands, costs or judgments arising out of the location of the Obstruction on the drainage and utility easement, including its reasonable costs in defending against any such claims. For the same consideration, the Owner agrees to release and discharge the City and The Water Works Board of the City of Auburn, Alabama from any damages to the Obstruction arising from utility maintenance work within the easement. The obligations of this indemnity shall be binding upon the successors and assigns of the Owner and shall be a covenant running with the land and shall be binding upon all future owners of the property on which the easement is located.

[Remainder of page intentionally left blank]

EXECUTED this the _____ day of _____, 20__.

_____
Owner

By: _____
Its _____

CITY OF AUBURN, ALABAMA

By: _____
Its _____

THE WATER WORKS BOARD OF THE
CITY OF AUBURN, ALABAMA

By: _____
Its _____

STATE OF ALABAMA

LEE COUNTY

I, the undersigned authority, a Notary Public in and for said County, in said State, hereby certify that _____, whose name is signed to the foregoing instrument, on behalf of the Owner, and who is known to me, acknowledged before me on this date that, being informed of the contents of the foregoing document, he/she executed the same voluntarily on the day the same bears date.

Given under my hand and official seal this the _____ day of _____, 20___.

_____
Notary Public
Commission Expires _____

STATE OF ALABAMA

LEE COUNTY

I, the undersigned authority, a Notary Public in and for said County, in said State, hereby certify that _____, whose name is signed to the foregoing instrument, on behalf of the City of Auburn, Alabama, and who is known to me, acknowledged before me on this date that, being informed of the contents of the foregoing document, he/she executed the same voluntarily on the day the same bears date.

Given under my hand and official seal this the _____ day of _____, 20___.

_____
Notary Public
Commission Expires _____

STATE OF ALABAMA

LEE COUNTY

I, the undersigned authority, a Notary Public in and for said County, in said State, hereby certify that _____, whose name is signed to the foregoing instrument, on behalf of The Water Works Board of the City of Auburn, Alabama, and who is known to me, acknowledged before me on this date that, being informed of the contents of the foregoing document, he/she executed the same voluntarily on the day the same bears date.

Given under my hand and official seal this the _____ day of _____, 20___.

_____
Notary Public
Commission Expires _____

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APPENDIX D. Easement Encroachment Agreement

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STATE OF ALABAMA)
)
COUNTY OF LEE)

LICENSE AGREEMENT

This Agreement made and entered into on this the_____day of_____, by and between The City of Auburn, Alabama, a municipal corporation, hereinafter referred to as "Licensor" and_____, hereinafter referred to as "Licensee."

STATEMENT OF BACKGROUND INFORMATION

1. The City of Auburn, Alabama is the owner of that certain drainage and utility easement from_____, dated_____, and recorded in the Office of the Judge of Probate of Lee County, Alabama in _____.

2. Licensee has requested that it be permitted to construct and install its _____and associated appurtenances within said easement, being further described on that certain map marked "Exhibit A", attached hereto and made a part hereof by reference, and in consideration thereof has agreed to indemnify and hold harmless Licensor from any and all damages caused by its use of said easement. Licensee agrees to restore the drainage and utility easement to preconstruction conditions or better.

STATEMENT OF AGREEMENT

NOW, THEREFORE, for and in consideration of the above recitations and the mutual covenants and agreements contained herein, the parties do hereby agree as follows:

1. Licensee is hereby granted a revocable license or permit to install within the boundaries of the above-described easement its _____ and associated appurtenances in accordance with plans and specifications approved by the Licensor and at a location agreed upon by Licensor.

2. Licensee does hereby indemnify and hold harmless Licensor for any and all claims, damages and liability incurred by Licensor as a result of Licensee's _____and associated appurtenances being located within said easement and shall further be responsible for the payment or reimbursement of all defense costs, including, but not limited to, attorneys' fees which result from the same.

3. Licensor may terminate this Agreement at any time by giving to Licensee sixty (60) days written notice thereafter to so terminate this license in which case Licensee shall remove its_____and associated appurtenances as soon as practical thereafter at no expense to the Licensor.

IN WITNESS WHEREOF, the parties have executed this License Agreement on the date first written above.

THE CITY OF AUBURN, ALABAMA,
A MUNICIPAL CORPORATION,

BY: _____
ITS: Mayor

ATTEST:

BY: _____
ITS: City Manager

_____
LICENSEE

BY:_____(L.S.)

ITS:_____

STATE OF ALABAMA

LEE COUNTY

I, the undersigned authority, a Notary Public in and for said County, in said State, hereby certify that_____, whose name is signed to the foregoing instrument, and who is known to me, acknowledged before me on this date that, being informed of the contents of this document, he/she executed the same voluntarily on the day the same bears date.

Given under my hand and official seal this the___day of_____.

_____
Notary Public
Commission Expires_____

APPENDIX E-1. Request for Design and Construction Standard Waiver Form

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City of Auburn
Engineering Services Department
161 North Ross Street
Auburn, Alabama 36830
webengineering@auburnalabama.org

City of Auburn

Request for Design and Construction Waiver

PROJECT INFORMATION Date: _____

Name of Project: _____ Project Address: _____

Applicant Name: _____ Telephone No.: _____

Applicant Address: _____ Applicant Firm: _____

WAIVER INFORMATION

Existing Standard

Manual Section Number and Title: _____

Brief Description of Existing Standard: _____

_____

_____

Proposed Waiver

Description of Proposed Waiver: _____

_____

_____

_____

Hardship or Justification for Waiver (See Waiver Criteria in Section 1.11.2.1): _____

_____

_____

_____

ATTACHMENTS

List all supporting documentation submitted with this form: _____

_____

_____

Note: For waivers to Standard Details, submit a hard-copy of the detail showing each proposed modification encircled with a "cloud."
For appealing a waiver denial, written application must be submitted to the Planning Commission within 30 days of the denial.

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APPENDIX E-2. Amendments

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RESOLUTION NO. 11-197

WHEREAS, the City Council of the City of Auburn approved and adopted the Public Works Design and Construction Manual on November 2, 2010 with an effective date of January 1, 2011; and,

WHEREAS, the City Engineer, in collaboration with the development community, finds it necessary to implement material changes (a copy of which is attached and made a part hereof) for clarification and to comply with rule changes in the industry and to make these changes effective immediately.

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Auburn, Alabama does hereby approve and accept the changes to the Public Works Design and Construction Manual effective immediately.

ADOPTED AND APPROVED by the City Council of the City of Auburn, Alabama, this the 15th day of November 2011.

BILL HAM, JR., Mayor

ATTEST:

CHARLES M. DUGGAN, JR., City Manager

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Summary of Proposed Changes to the Public Works Design & Construction Manual (PWDCM)

Table of Contents

1. Added Appendix B-6, Signature Bond for Development. The Signature Bond was referenced but no formal document was included in the manual.
2. Added Appendix E-2, Amendment Number 1. As the PW Manual is amended, copies of the resolution, changes, and effective date will become a part of the manual.

Section 1 – General Information

Section 1.2.1 Definitions

1. Include a definition for Development Agreement.

Section 1.3.3.6 Bonding

1. Added a reference to the location of the Signature Bond.

Section 1.3.3.8 Development Committee

1. Added a reference to the location of the Signature Bond and removed requirement for a performance bond to cover costs of improvements.

Section 1.3.4.3 DRT Submittal Requirements

1. Added language to define that the Stormwater Storage Facility Operations & Maintenance Agreement shall be submitted before the Zoning Certificate is issued.
2. Added minimum 300 dpi resolution requirement for digital submittals.

Section 1.3.4.4 DRT Forms and Checklists

1. Provide clarification on the intent of the forms and when they are required for a development.

Section 1.3.5.5 AWWB Water Main Connection Permit

1. Provide clarification to the chain of custody of the Water Main Connection Permit.

Section 1.5.1 As-Built Submittal

1. Add reference to the geoid model to be used for as-built surveys.
2. Add reference to the Continually Operating Reference Station (CORS) to be used for Global Position System (GPS) surveys and control datum.
3. Include a minimum observation time for GPS surveys for both critical and non-critical coordinates.
4. Include a maximum Position Dilution of Precision (PDOP) value allowed for GPS surveys.
5. Add minimum resolution requirements for digital submittals.

Section 1.6.1 Easements Discussion

1. Provide clarification that creek and ditch crossings must be made accessible prior to acceptance of the infrastructure.

Section 1.6.4 Easement Language

1. Add indemnity note for obstructions placed on easements.

Section 1.8 Acceptance

1. Provide clarification on Board authority and maintenance responsibility consistent with the current Backflow Prevention and Cross-Connection Control Policy.
2. Change “Sewer Division Manager” to “Sewer Collection System Manager”.

Section 1.9 Warranty Period

1. Provide clarification that the Board or the City will invoice the developer for any costs associated with required repairs due to defects in materials and workmanship during the warranty period.

Section 1.10 Fees and Charges

1. Remove all references to sewer surcharge areas.

Figure 1.1 Development Review Process Flowchart

1. Changed language from “DRT Secretary” to “Public Works” for consistency.
2. Added an action item “BMPs Installed by the Contractor and Inspected by the City” prior to Issuance of Clearing, Grading & Utility Permit.

Appendix B-4 Drainage Checklist

1. Updated Stormwater Drainage checklist verbiage to coincide with forms.
2. Changed the basin/sub basin pre development, post development, and sub basin peak forms to reference a Point-of-Analysis approach instead of a basin approach for consistency with practice.

Appendix B-6 Signature Bond

1. Added the Signature Bond for Development to be executed under specific circumstances. The Signature Bond was referenced but no formal document was included in the manual.

Appendix E-2 Amendments

1. Amendment Number 1. As the PW Manual is amended, copies of the resolution, changes, and effective date will become a part of the manual.

Section 2 – Traffic Signal Design Guidelines

Section 2.1.1 Signal Heads

1. Added requirement for a quick disconnect feature on LED lenses and wire termination in a terminal block to simplify maintenance.

Section 2.1.6 Power Supply

1. Added reference to standard details and specify a service disconnect.

Standard Details

1. Modified Signals Detail Sheet 1 to conform to MUTCD requirements
2. Modified Detail Sheet 2 to incorporate decorative top
3. Modified Detail Sheet 3 to enlarge details
4. Modified material specifications on Signals Detail Sheet 4.

Section 3 – Traffic Calming

Section 3.1 Traffic Calming Process Summary

1. Removed requirement for 66% approval response limit to allow neighborhoods that do not meet traffic calming warrants to still petition with 80% approval required for installation.

Section 3.4 Neighborhood Petitions and Cost Share

1. Modified the amount of time a petition can circulate to 3 months.

Section 5 – Roadway Design

Section 5.2.4.3 Sidewalks

1. Changed the minimum sidewalk width to 4' for local and cul-de-sac streets, and 5' for arterials, collectors, and residential collectors.

Section 5.2.6 Driveways

1. Added language to clarify City involvement for driveways proposed to tie to state routes within the City of Auburn.

Section 5.2.6.2 Driveway Location

1. Revised the language that specifies driveway location for double frontage lots. The language clarifies that this will be in residential developments.
2. Changed the language that when a property is proposed for a change of use, existing driveways that do not comply with the Manual "should" be closed instead of "shall".

Section 5.2.6.3 Driveway Spacing

1. Removed driveway spacing requirements identified for Shug Jordan, EUD, and Auburn Outer Loop. Spacing along these roadways will be per the arterial standards.
2. Clarified that the average curb cut spacing requirement applies to "residential collector streets" instead of simply "collector streets" and how the calculation is performed.

Section 5.3.7 Deceleration Lanes and Tapers

1. Added reference to Appendix K for requirements for deceleration lanes.

Appendix K

1. Added notation for segments where right turn deceleration lanes are required

Appendix L

1. Updated list

Standard Details

1. Modified Streets Detail Sheet 12 to modify sidewalk requirements and identify requirements for ADA passing lanes.
2. Modified Streets Detail Sheet 13 to specify Detectable Warnings at handicap ramps as optional.
3. Added Streets Detail Sheet 25, Bus Turnout detail.

Section 7 – Drainage Section

Appendix T Stormwater Storage Facility Operation and Maintenance Agreement

1. Modified document to include owner/grantor contact information.

RESOLUTION NO. 12-245

WHEREAS, the City Council of the City of Auburn approved and adopted the Public Works Design and Construction Manual on November 2, 2010 with an effective date of January 1, 2011; and,

WHEREAS, the City Engineer, in collaboration with the development community, finds it necessary to implement material changes (a copy of which is attached and made a part hereof) for clarification and to comply with rule changes in the industry and to make these changes effective January 1, 2013.

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Auburn, Alabama does hereby approve and accept the changes to the Public Works Design and Construction Manual effective January 1, 2013.

ADOPTED AND APPROVED by the City Council of the City of Auburn, Alabama, this the 18th day of December 2012.

BILL HAM, JR., Mayor

ATTEST:

CHARLES M. DUGGAN, JR., City Manager

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Pending Updates for the Public Works Design & Construction Manual

December, 2012

Table of Contents

1. Added 5.2.4.4 and 5.3.2.4 Irrigation
2. Added 5.3.2.5 Gates
3. Added Appendix P-1 Irrigation Policy

Section 1 – General Information

Section 1.3.3.6 Bonding

1. Added a reference to the bonding amount of 125% to help reduce the forfeiting of bonds by developers.

Section 1.3.4.1 DRT Process Overview

1. Clarified language regarding meeting date and reference to the location of DRT information.
2. Changed continuance guidelines from three weeks to six months.
3. Changed denial guidelines to coincide with expiration of continuance.

Section 1.3.4.3 DRT Submittal Requirements

1. Reduced numbers of full-size copies of plans required from 2 to 1, added a PDF submittal, and require hard and digital copy of the drainage report and traffic impact study to be submitted to be consistent with current practice.
2. Clarified final submittal requirements to include recorded Stormwater Storage Facility Operation and Maintenance Agreement to be consistent with current practice.

Section 1.5 Project Completion Requirements As-Built Drawings

1. Updated reference to datum due to changes in the CORS.

Appendix A-1 Site Development Application for DRT Submittal

1. Removed reference to posting comments on the City's website due to most engineers not wanting comments posted.

Appendix A-2 Subdivision Development Application for DRT Submittal

1. Removed reference to posting comments on the City's website due to most engineers not wanting comments posted.

Appendix E-2 Amendments

1. Amendment Number 2. As the PW Manual is amended, copies of the resolution, changes, and effective date will become a part of the manual.

Section 2 – Traffic Signal Design Guidelines

Section 2.1.2 Signal Supports

1. Removed references to Pelco since Pelco no longer makes the poles.

Section 2.1.4 Communications

1. Added option for other types of communication equipment to allow flexibility in equipment.

Section 2.1.6 Power Supply

1. Clarified the type of UPS and housing requirements.

Section 2.1.7 Vehicle Detection

1. Specify detection method must be approved by the City Engineer.

Section 2.1.7.4 Wireless Detection

1. Removed reference to wireless as the preferred detection method to provide flexibility in types of detection equipment.

Section 2.1.10 Pedestrian Signal

1. Added manufacturer's information on the push button.

Section 2.1.10.1 Warrants

1. Included reference to sidewalk to the list of evaluation items.

Section 2.1.11 Intersection Lighting

1. Specified cobra head fixture manufacturer's information.

Appendix G

1. Modified notes to eliminate reference to Pelco.
2. Clarified color of ball at top of crown.
3. Added luminaire arm and assembly to the traffic signal pole assembly.

Standard Details

1. Modified Signals Detail Sheet 2 to correct signal head placement and specify pole manufacturer.
2. Modified Signals Detail Sheet 4 underground power source details.
3. Removed Pelco details for the pole, arm, and arm clamp.

Section 3 – Traffic Calming

Section 3.2.2 Speed

1. Modified speeds in Table 3.1 to include ranges.

Section 3.3 Result of Traffic Calming Analysis

1. Modified speeds to include ranges.

Section 4 – Traffic Impact Studies

Section 4.2.2 Evaluation Elements

1. Added internal site circulation and flow to the analysis to be consistent with current practice.

Section 4.2.3 Roadway Traffic Volumes/Traffic Counts

1. Extended time for use of volumes from one to two years unless the area has experienced significant traffic growth.

Section 5 – Roadway Design

Section 5.2 Roadway Design Elements

1. Added reference to the International Fire Code (IFC).

Section 5.2.4.1 Streets

1. Added reference to the ALDOT Guidelines for Operation relative to asphalt placement rates and thicknesses.
2. Added reference to the International Fire Code (IFC).

Section 5.2.4.3 Sidewalks

1. Clarified reference to collectors for sidewalk location on both sides of a roadway.

Section 5.2.4.4 Irrigation

1. Added reference to the Irrigation Policy (Appendix P-1)

Section 5.2.6.1 Design Criteria

1. Added language to allow use of an engineered, site specific driveway turnout design.

Section 5.2.10 Median Openings

1. Clarified the type, location, and length of medians.
2. Added language to specify City Council's purview for median openings on College Street and West Glenn Avenue.

Section 5.3.2.4 Irrigation

1. Added reference to the Irrigation Policy (Appendix P-1)

Section 5.3.2.5 Gates

1. Added information relative to the allowance of gates.

Section 5.3.5 Left Turn Lane Warrants at Unsignalized Intersections

1. Updated based on new NCHRP.

Section 5.3.6 Right Turn Lane Warrants

1. Updated based on new NCHRP.

Section 5.3.7 Deceleration Lanes and Tapers

1. Clarified language for requirements for deceleration lanes.

Section 5.6 Street Lighting

1. Added requirement that all new subdivisions will have street lighting installed and have lighting plans approved prior to installation.

Section 5.7 Signing and Pavement Markings

1. Added reference for solar-powered marker installation for approved mid-block crossings.

Appendix K

1. Removed street segments where right turn deceleration lanes are required.

Appendix L

1. Added Cary Creek Parkway.

Appendix N

1. Updated form to include submission contact information.

Standard Details

1. Modified Streets Detail Sheet 1 to clarify sidewalk requirement and minimum width of 4'.
2. Modified Streets Detail Sheet 2 to clarify sidewalk requirement must be waived by Planning Commission to allow use.
3. Modified Streets Detail Sheet 9 to require toewall at end of flume.
4. Modified Streets Detail Sheet 10 to allow use of an engineered, site specific driveway turnout design.
5. Modified Streets Detail Sheet 14 to denote Detectable Warnings at handicap ramps as optional and the cross slope on the bottom detail to ¼" per foot.
6. Modified Streets Detail Sheet 16 to show minimum width of multi-use path as 8' instead of 10'.
7. Modified Streets Detail Sheet 17 to show minimum width at entrance of parking area to 21' instead of 24' and extended dimension line to include gutter as requested by local engineers.
8. Modified Streets Detail Sheet 18 to extend dimension line to include gutter.
9. Modified Streets Detail Sheet 19 to extend dimension line to include gutter.
10. Modified Streets Detail Sheet 20 to replace perpendicular striping with tick marks, and reverse flow direction.
11. Updated Streets Detail Sheet 22 to reference latest International Building Code.

Section 7 – Drainage Section

Section 7.2.4 United States Geological Survey Regression Equation

1. Updated equation.

Section 7.2.5 Permeable Pavement

1. Clarified use of permeable pavement.

Standard Details

1. Added details for standard inlets with Neenah grates.
2. Updated Streets Detail Sheet 6 to require mechanical tamping around inlets.

RESOLUTION NO. 14-19

WHEREAS, the City Council of the City of Auburn approved and adopted the Public Works Design and Construction Manual on November 2, 2010 with an effective date of January 1, 2011; and,

WHEREAS, the City Engineer, in collaboration with the development community, finds it necessary to implement material changes (a copy of which is attached and made a part hereof) for clarification and to comply with rule changes in the industry and to make these changes effective immediately.

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Auburn, Alabama does hereby approve and accept the changes to the Public Works Design and Construction Manual effective immediately.

ADOPTED AND APPROVED by the City Council of the City of Auburn, Alabama, this the 4th day of February 2014.

Mayor

ATTEST:

City Manager

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Pending Updates for the Public Works Design & Construction Manual
February, 2014

Table of Contents

1. Added 5.11 Private Streets.
2. Added Appendix T-1. Stormwater Storage Facility Operation and Maintenance Agreement for Subdivisions.

Section 1 – General Information

Section 1.3.4.3 DRT Submittal Requirements

1. Removed required submittal of offsite easements for the initial submittal.
2. Added submission of required offsite easements with final submittal.
3. Changed submittal of the Stormwater Storage Facility Operation and Maintenance Agreement to be consistent with current practice.
4. Required digital copies of the final Traffic Impact Study and Drainage report with the final submittal.

Section 1.5.1 Surveying

1. Updated CORS name and reference number.
2. Updated water distribution features.
3. Updated storm water features to include outlet structure and shape.

Section 1.5.3 Submittal

1. Changed the submittal requirement to be consistent with current practice.

Section 1.6.4 Easement Language

1. Added a standard hold harmless note to cover irrigation systems.

Appendix E-2 Amendments

1. Amendment Number 3. As the PW Manual is amended, copies of the resolution, changes, and effective date will become a part of the manual.

Section 2 – Traffic Signal Design Guidelines

Section 2.1.1 Signal Heads

1. Removed references to GELcore.

Section 2.1.5 Signal Wiring, Conduit, and Junction Boxes

1. Clarified wiring installation methods to be consistent with current practice.

Section 2.1.7.3 Video Detection

1. Specify color camera instead of black and white.

Section 2.1.9 Intersection Signage

1. Changed specifications for illuminated signs to be consistent with current practice.

Section 2.1.10.3 Timing

1. Updated equation.

Standard Details

1. Modified Signals Detail Sheet 2 to show complete pole details.
2. Modified Signals Detail Sheet 4 underground power source details.

Section 5 – Roadway Design

Section 5.1

1. Added reference to plans adopted by the City and how they are incorporated into the PWDCM.

Section 5.2.4.3 Sidewalks

1. Added reference to Public Right of Way Accessibility Guidelines (PROWAG).
2. Clarified local commercial roadways to have 5' wide sidewalk.

Section 5.2.6.1 Design Criteria

1. Added language to allow additional width at the right of way for radius flares.

Section 5.2.6.5 Shared Driveways

1. Added language to specify the maximum width of a shared residential driveway.

Section 5.3.6 Right Turn Lane Warrants

1. Changed the National Cooperative Highway Research Program Report (NCHRP) from Report 279 to Report 457.

Section 5.11 Private Street

1. Incorporated language for the construction of private street.

Appendix K

1. Updated street names and segments.

Appendix L

1. Corrected the spelling of 'Mitcham' Avenue.

Appendix M

1. Added new streets

Standard Details

1. Modified Streets Detail Sheet 1 to clarify slope of greenspace for non-curb and gutter streets.
2. Added Street Detail Sheet 10A and 10B to show options for constructing sidewalks across driveway turnouts.
3. Modified Streets Detail Sheet 12 to add reference to PROWAG and added local commercial reference to 5' wide sidewalk.
4. Modified Streets Detail Sheet 13 to denote Detectable Warnings at handicap ramps as required.
5. Modified Streets Detail Sheet 14 to denote Detectable Warning Device as required.

Section 7 – Drainage Section

Section 7.4.5 Operation and Maintenance

1. Clarified submission requirements for the agreement.

Section 7.5.6 Conditional Letter of Map Revision

1. Changed the requirement of a CLOMR submission from ‘may’ to ‘will’ and adjusted when the CLOMR is needed.

Appendix T-1

1. Included an Operation and Maintenance Agreement applicable to subdivision projects.

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RESOLUTION NO. 14-267

WHEREAS, the City Council of the City of Auburn approved and adopted the Public Works Design and Construction Manual on November 2, 2010 with an effective date of January 1, 2011; and,

WHEREAS, the City Engineer, in collaboration with the development community, finds it necessary to implement material changes (a copy of which is attached and made a part hereof) for clarification and to comply with rule changes in the industry and to make these changes effective January 1, 2015.

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Auburn, Alabama does hereby approve and accept the changes to the Public Works Design and Construction Manual effective January 1, 2015.

ADOPTED AND APPROVED by the City Council of the City of Auburn, Alabama, this the 16th day of December 2014.

BILL HAM, JR., Mayor

ATTEST:

CHARLES M. DUGGAN, JR., City Manager

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Summary of Proposed Changes to the Public Works Design & Construction Manual (PWDCM)
December, 2014

Table of Contents

1. Added Appendix P-2 Decorative Street Signs Policy.

Section 1 – General Information

Section 1.5.3 Project Completion Requirements – As-Built Drawings

1. Added language to specify how long the City quality control check should take.

Appendix B-1 and B-2

1. Modified forms to include the project name, modified the width of the construction exit pad, and added C-POP Silt Fence.

Appendix E-2 Amendments

2. Amendment Number 4. As the PW Manual is amended, copies of the resolution, changes, and effective date will become a part of the manual.

Section 2 – Traffic Signal Design Guidelines

Section 2.1.3 Cabinet and Controller Equipment

1. Clarified the requirement for cabinets.

Section 2.1.5 Signal Wiring, Conduit, and Junction Boxes

1. Clarified the size and lid requirements for junction boxes.

Section 2.1.6 Power Supply

1. Clarified the requirement for cabinets.

Section 2.1.10 Pedestrian Signal

1. Added language referencing the Public Rights-of-Way Accessibility Guidelines' (PROWAG).

Section 2.1.10.3 Timing

1. Changed pedestrian walking time from four seconds to three seconds and referenced the MUTCD.

Appendix G Traffic Signal Notes

1. Updated notes to be consistent with current practice on type of Mast Arm Pole and Pedestrian Pole. This includes type of pedestrian pole to be used.

Section 3 – Traffic Calming

Appendix I

1. Modified the example on the form.
2. Added reference to online form.

Section 5 – Roadway Design

Section 5.2.4.3 Sidewalks

1. Added language referencing the Public Rights-of-Way Accessibility Guidelines' (PROWAG).

Section 5.7.1 Street Name Signs

1. Incorporated language from the Decorative Street Signs Policy (Appendix P-2).

Appendix M

2. Changed Corporate Drive to Corporate Parkway.

Appendix N

1. Added reference to online form.

Standard Details

1. Modified Streets Detail Sheet 6 to clarify temporary and permanent patch requirements.
2. Modified Streets Detail Sheet 14 to clarify slope requirements for handicap ramps.

RESOLUTION NO. 15-285

WHEREAS, the City Council of the City of Auburn approved and adopted the Public Works Design and Construction Manual on November 2, 2010 with an effective date of January 1, 2011; and,

WHEREAS, the City Engineer, in collaboration with the development community, finds it necessary to implement material changes (a copy of which is attached and made a part hereof) for clarification and to comply with rule changes in the industry and to make these changes effective January 1, 2016.

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Auburn, Alabama does hereby approve and accept the changes to the Public Works Design and Construction Manual effective January 1, 2016.

ADOPTED AND APPROVED by the City Council of the City of Auburn, Alabama, this the 15th day of December 2015.

Mayor

ATTEST:

City Manager

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Pending Updates for the Public Works Design & Construction Manual
December, 2015

Table of Contents

1. Added Section 5.6.4 Decorative Pedestrian Lighting.
2. Added Section 5.9.1 Transit Stops.
3. Added Section 5.12 Greenways.

Section 1 – General Information

Section 1.2.5 Acronyms and Definitions - Definitions

1. Added definition for ADA.
2. Added reference to the digital location for the standard specifications and standard details.

Section 1.3.1 Development Process – Overview

1. Added reference to the territorial jurisdiction of the City.

Section 1.3.3 Development Process – Subdivision

1. Added reference to reviews affected by the Lee County Planning Commission in the territorial jurisdiction of the City.

Section 1.3.3.4 Development Process – Engineering Plan

1. Added reference for developments in the territorial jurisdiction of the City.

Section 1.3.3.6 Development Process – Bonding

1. Added reference for street lighting requirements.

Section 1.3.4.1 Development Review Team – DRT Process Overview

1. Added review time for developments in the territorial jurisdiction of the City.

Section 1.3.4.3 Development Review Team – DRT Submittal Requirements

1. Added option for digital submittals.

Section 1.3.5 Permits

1. Added reference to departments responsible for each permit

Section 1.3.5.4 Permits – Clearing, Grading, and Utility Permit

1. Added requirement for submission of soil proctor information as part of this permit.

Section 1.4.2 Project Completion Requirements – Construction – Materials

1. Added reference to the digital location for the standard specifications and standard details.

Section 1.4.4 Project Completion Requirements – Construction – Inspection and Testing

1. Added reference for inspection of developments within the territorial jurisdiction.

Section 1.5.1 Project Completion Requirements – As-Built Drawings

1. Updated the reference to the Geoid model name.
2. Added requirements for control points and modified the horizontal and vertical accuracy of critical and non-critical points.

3. Added requirements for as-built drawings when pertaining to City maintained infrastructure.

Section 1.11.2.2 Updates and Waivers to the Manual - Procedure

1. Changed the appeal body from the Building Board of Adjustment to Planning Commission.

Appendix A-2

1. Modified form to include Lee County Review.

Appendix B-1 and B-2

1. Updated the forms to modify the water tank elevation to 820 on the pressure calculations.

Appendix E-1

1. Modified form to remove multiple waivers and provide justification area.

Appendix E-2 Amendments

1. Amendment Number 5. As the PW Manual is amended, copies of the resolution, changes, and effective date will become a part of the manual.

<u>Section 2 – Traffic Signal Design Guidelines</u>

Section 2.1.1 Signal Design Elements – Signal Heads

1. Clarified the type and color of mounting hardware and positioning of signal heads.

Section 2.1.2 Signal Design Elements – Signal Supports

1. Removed reference to separation requirements.

Section 2.1.3 Signal Design Elements – Cabinet and Controller Equipment

1. Modified the requirement for cabinets.

Section 2.1.4 Signal Design Elements – Communications

1. Clarified how equipment is handled when an intersection is modified or upgraded.

Section 2.1.5 Signal Design Elements – Signal Wiring, Conduit, and Junction Boxes

1. Added requirements for wiring when an intersection is modified or upgraded.
2. Clarified requirements for conduit.

Section 2.1.6 Signal Design Elements – Power Supply

1. Clarified how the power source is determined and changed the battery backup part number.

Section 2.1.7 Signal Design Elements – Vehicle Detection

1. Modified the requirement for video detection when an intersection is newly signalized or modified.
2. Clarified the requirements for loop wire.

Section 2.1.7.3 Signal Design Elements – Video Detection

1. Modified video detection requirements to include bicycles.
2. Added color requirement for cameras and mounting hardware.

Section 2.1.9 Signal Design Elements – Intersection Signage

1. Clarified requirements for illuminated signs.

Section 2.1.10 Pedestrian Signal

1. Clarified requirements for mounting hardware.
2. Modified requirements for pedestrian push buttons, including signage and Polera settings.

Section 2.1.11 Intersection Lighting

1. Clarified luminaire assembly fixture type.

Section 2.4 Construction

1. Added notification requirement to beginning work.

Section 2.4.3 Inspection

1. Added inspection requirements for traffic signals.

Appendix H

1. Added Sheet 5- Decorative Pedestrian Light detail.
2. Added Sheet 6 – Pedestrian Push Button Pole detail.

<u>Section 5 – Roadway Design</u>

Section 5.2.4.3 Roadway Design Elements – Sidewalks

1. Clarified cross slope requirements for sidewalk.
2. Added requirements for streetscape improvements within the Downtown Area, to include wider sidewalks, street trees, and decorative lighting.
3. Clarified sidewalk termination grading requirements.
4. Added inspection requirements for sidewalk within the right of way.
5. Added requirements for street trees, including tree wells, brick color, and Silva Cells.

Section 5.2.7.2 Roadway Design Elements - Bicycle and Pedestrian Facilities – Bicycle Lanes

1. Modified reference to design requirements for bicycle lanes.

Section 5.2.7.3 Roadway Design Elements - Bicycle and Pedestrian Facilities – Shared Roadway

1. Modified reference to design requirements for shared roadways.

Section 5.3 Intersection Design Elements

1. Added language regarding street jogs.

Section 5.6.4 Street Lighting – Decorative Pedestrian Lighting

1. Added requirements for decorative street lighting.

Section 5.8 Right-of-way Planting

1. Added requirements for street trees, including tree wells, brick color, and Silva Cells.

Section 5.9.1 Access Management and Coordination - Transit Stops

1. Added requirement for transit stops for purpose built student housing.

Section 5.12 Greenways

1. Added requirements for greenways.

Appendix K

1. Changed Richland Road segment.
2. Added segment to Wire Road.

Appendix L

1. Added directional points to seven (7) collector roads.
2. Added six (6) collector roads.

Appendix O

1. Modified Streets Detail Sheet 11 to specify minimum sidewalk cross slope, add a requirement for joint sealant, and make the expansion material consistent.
2. Modified Streets Detail Sheet 17 to clarify width requirements at landscaped islands.
3. Added Sheet 29 Silva Cell detail sheet.
4. Added Sheets 30 through 35 Tree Well and Grate detail sheets.
5. Added Sheet 36 Bus Turnout detail.
6. Added Sheet 37 Right In Right Out detail.
7. Changed all applicable slopes on details to percent instead of fractional representations.
8. Changed all applicable slopes on sidewalk details to include word ‘Maximum’.
9. All sheets were renumbered due to the additional sheets.

RESOLUTION NO. 17-329

WHEREAS, the City Council of the City of Auburn approved and adopted the Public Works Design and Construction Manual on November 2, 2010 with an effective date of January 1, 2011; and,

WHEREAS, the City Engineer, in collaboration with the development community, finds it necessary to implement material changes (a copy of which is attached and made a part hereof) for clarification and to comply with rule changes in the industry and to make these changes effective January 1, 2018.

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Auburn, Alabama does hereby approve and accept the changes to the Public Works Design and Construction Manual effective January 1, 2018.

ADOPTED AND APPROVED by the City Council of the City of Auburn, Alabama, this the 19th day of December 2017.

Mayor

ATTEST:

City Manager

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Summary of Proposed Changes to the Public Works Design & Construction Manual
December 2017

Table of Contents

1. Added Section 1.3.5.10 Sanitary Sewer Connection Permit.
2. Renumbered Other Permits, Section 1.3.5.11.
3. Added Appendix P-3 Downtown Sidewalks and Pedestrian Lighting Map.
4. Added Appendix P-4 Decorative Pedestrian Lighting Master Plan.

Section 1 – General Information

Section 1.3.1 Development Process – Overview

1. Added reference to infrastructure requirements for developments within the City.

Section 1.3.3.2 Lot Layout Plans

1. Added reference to the Subdivision Regulations.

Section 1.3.3.3 Preliminary Plat

1. Added reference to the Subdivision Regulations.

Section 1.3.3.4 Engineering Plan

1. Added reference to the checklist in Appendix B.

Section 1.3.3.5 Final Plat

1. Added reference to the Subdivision Regulations.

Section 1.3.4.1 Development Review Team – DRT Process Overview

1. Added review time for revised plan submittals.

Section 1.3.4.2 Development Review Team – Preconstruction Meeting

1. Clarified requirements and attendees for the preconstruction meeting.

Section 1.3.4.3 DRT Submittal Requirements

1. Modified submittal requirements.

Section 1.3.5.5 Permits – AWWB Water Main Connection Permit

1. Added references to the WRM Design and Construction Manual.

Section 1.3.5.6 Permits – Blasting Permit

1. Added references to the Communications Division of Public Safety and the State of Alabama.

Section 1.3.5.8 Permits – Building Permit

1. Removed reference to the number of permits required for developments.

Section 1.3.5.10 Permits – Sanitary Sewer Connection Permit

1. Added information relative to the requirements for sanitary sewer connection permits.

Section 1.5.1 Surveying

1. Added requirement for as builts for decorative pedestrian lighting.

Section 1.6.1 Discussion

1. Removed information relative to the rededication of easements.

Section 1.9 Project Completion Requirements – Warranty Period

1. Clarified when the warranty period for a development starts and the responsibility of the developer during the warranty period.

Appendix A-1 Site Development Application for DRT Submittal

1. Clarified required email address for comments.
2. Added notation of applicant/owner contact information if DRT comments are to be provided to someone other than engineer.

Appendix A-2 Subdivision Development Application for DRT Submittal

1. Clarified required email address for comments.
2. Added notation of applicant/owner contact information if DRT comments are to be provided to someone other than engineer.

Appendix B-1 Site Development Plans Engineering Checklist

1. Added DRT permit number.
2. Added statement regarding comparison points.

Appendix B-2 Subdivision Construction Plans Engineering Checklist

1. Added DRT permit number.
2. Added statement regarding comparison points.

Appendix B-3 Site Plan Sufficiency Checklist

1. Clarified how the form should be filled out.

Appendix E-1 Request for Design and Construction Standard Waiver Form

1. Added City logo and applicant address.

Appendix E-2 Amendments

1. Amendment Number 6. As the PW Manual is amended, copies of the resolution, changes, and effective date will become a part of the manual.

Section 2 – Traffic Signal Design Guidelines

Section 2.1.1 Signal Design Elements – Signal Heads

1. Clarified the location of the wire for mast arm intersections.

Section 2.1.3 Cabinet and Controller Equipment

1. Added requirement for spare conduit.

Section 2.1.5 Signal Wiring, Conduit and Junction Boxes

1. Added requirement for spare conduit.

Section 2.1.6 Signal Design Elements – Power Supply

1. Added color requirements for the service disconnect.

Section 2.1.7.3 Signal Design Elements – Video Detection

1. Added color requirement for mounting hardware.

Section 2.1.9 Signal Design Elements – Intersection Signage

1. Changed the photocell requirements for illuminated signs.

Standard Details

1. Modified Signals Detail Sheet 1 to delete R10-3e sign.
2. Modified Signals Detail Sheet 2 to clarify location of cables, clarify location of pedestrian signal heads, specify the type of Holophane pole, and clarify distance requirements for the push button.
3. Modified Signals Detail Sheet 3 to clarify loop lengths.
4. Modified Signals Detail Sheet 5 to specify breakaway post model number.
5. Modified Signals Detail Sheet 6 to clarify wire sizes, bury depths for conduit, and denote the decorative ball.
6. Added details for the breakaway pole bases and notes (Sheets 7-9).

Section 4 – Traffic Impact Studies

Section 4.2.13 Mitigation Thresholds and Measures

1. Clarified requirements of traffic impact studies in regards to roadways within the study area that exceed the minimum acceptable LOS standard.

Section 5 – Roadway Design

Section 5.2.4 Typical Street Section

1. Clarified width of roadway at fire hydrants in Table 5.4.

Section 5.2.4.1 Roadway Design Elements – Streets

1. Added requirement for coordination with US Postal Service for centralized mail systems.

Section 5.2.4.3 Roadway Design Elements – Sidewalks

1. Expanded requirements for streetscape improvements within the Downtown Sidewalks & Pedestrian Lighting boundary, to include wider sidewalks, street trees, and decorative lighting. The specific reference to the Downtown Area was removed.

2. Added option for developer to pay for required sidewalk in locations deemed appropriate by the City.
3. Added distance requirements for sidewalk to extend to the nearest driveway or roadway for termination.

Section 5.2.6.5 Driveways – Shared Driveways

1. Clarified width for shared residential lots.

Section 5.2.8 Cul-De-Sacs

1. Clarified width requirement at fire hydrants.

Section 5.3.2.5 Intersection Design Elements - Gates

1. Added reference to the International Fire Code, latest edition.

Section 5.3.3 Sight Distance

1. Revised Table 5.7.

Section 5.6 Street Lighting

1. Added requirements for lighting in parking and/or common areas and at development entrances.

Section 5.6.4 Street Lighting – Decorative Pedestrian Lighting

1. Added reference to the Downtown Sidewalks and Pedestrian Lighting Map and the Decorative Pedestrian Lighting Master Plan for decorative pedestrian lighting.
2. Add a provision for the City to provide decorative pedestrian lights and/or panels associated with the project.

Section 5.11 Private Streets

1. Clarified the definition of a private street and added a requirement for sidewalk, to be determined during the DRT review.
2. Clarified width requirement at fire hydrants.

Section 5.12 Greenways

1. Added a reference to the Parks, Recreation and Culture Master Plan.

Appendix K Arterial Roads List

1. Clarified extents for North Donahue Drive.

Standard Details

1. Modified Streets Detail Sheet 19 to allow for use on trails and changed all applicable slopes on details to percent instead of fractional representations.
2. Modified Streets Detail Sheet 24 to clarify ADA sign distance requirement.

3. Modified Streets Detail Sheet 25 to remove specific reference to accessible parking requirement and added reference to the IBC.
4. Modified tree well frame detail sheets (Sheet 31, 32, 34).
5. Added detail for a roadway flare at a hydrant (Sheet 38).

Appendix P-3 Downtown Sidewalks and Pedestrian Lighting Map

1. Added map.

Added Appendix P-4 Decorative Pedestrian Lighting Master Plan

1. Added map.

Section 7 – Drainage

Section 7.3.8.5 Outlet Protection

1. Added requirements for installation of headwalls.

Section 7.4.1 Comparison Points

1. Clarified comparison point requirements.

Section 7.4.2.4 Regional Detention

1. Clarified construction and certification requirements for regional detention facilities.

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RESOLUTION NO. 18-323

WHEREAS, the City Council of the City of Auburn approved and adopted the Public Works Design and Construction Manual on November 2, 2010 with an effective date of January 1, 2011; and,

WHEREAS, the City Engineer, in collaboration with the development community, finds it necessary to implement material changes (a copy of which is attached and made a part hereof) for clarification and to comply with rule changes in the industry and to make these changes effective January 1, 2019.

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Auburn, Alabama does hereby approve and accept the changes to the Public Works Design and Construction Manual effective January 1, 2019.

ADOPTED AND APPROVED by the City Council of the City of Auburn, Alabama, this the 18th day of December 2018.

Mayor

ATTEST:

City Manager

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Summary of Proposed Changes to the Public Works Design & Construction Manual
December 2018

Manual

1. Removed all references to Public Works Department, Public Works Director and Codes Enforcement and replaced with Engineering Services Department, City Engineer and Inspection Services.

Title Page

1. Modified the name of the manual to reflect the new department due to the reorganization of February 1, 2018.

Section 1 – General Information

Section 1.2.5 Definitions

1. Corrected web link to the Standard Specifications and Details.

Section 1.3.4.3 Development Review Team – DRT Submittal Requirements

1. Added reference to the Auburn Permit Portal.
2. Clarified the submittal requirements.

Section 1.3.5 Permits

2. Added reference to Sanitary Sewer Connection permit.

Section 1.3.5.5 Permits – AWWB Water Main Connection Permit

1. Added time of at least 48 hours notification.

Section 1.3.5.10 Permits – Sanitary Sewer Connection Permit

1. Added time of at least 48 hours notification.

Section 1.4.2 Materials

1. Corrected web link to the Standard Specifications.

Section 1.4.2.1 Materials – Submittals

1. Modified number if submittals from five (5) to four (4).
2. Modified number of returned approved submittals from two (2) to one (1).

Section 1.5 Project Completion Requirements – As-Built Drawings

1. Added Preliminary Acceptance Letter.
2. Modified “Subdivision” to “Single-Family Residential.
3. Added “fee-simple or condo”.
4. Modified “Site Plan” to “Commercial or Multi-family Residential”.
5. Added timeline of ten (10) days for review of as-builts.

Appendix A-1 Site Development Application for DRT Submittal

1. Added space to include additional email addresses.
2. Added reference to the Auburn Permit Portal.

Appendix A-2 Subdivision Application for DRT Submittal

1. Added space to include additional email addresses.
2. Added reference to the Auburn Permit Portal.
3. Removed option of not posting review comments on the City's website.

Appendix E-1 Request for Design and Construction Standard Waiver Form

1. Added reference to section 1.11.2.1 – Waiver Criteria.

<u>Section 2 – Traffic Signal Design Guidelines</u>

Section 2.1.3 Signal Design Elements – Cabinet and Controller Equipment

1. Clarified cabinet components and controller for Flashing Yellow Arrow (FYA).

Section 2.1.4 Signal Design Elements – Communications

1. Clarified new installation requirements.

Section 2.1.4.2 Signal Design Elements – Communications – New System Implementation

1. Modified requirements for new signal installations.

Section 2.1.5 Signal Design Elements – Signal Wiring, Conduit, and Junction Boxes

1. Added requirements for wiring flashing yellow arrow (FYA) with associated wiring table.
2. Clarified requirements for conduit.

Section 2.1.7.3 Signal Design Elements – Vehicle Detection – Video Detection

1. Added requirement for video detection routing.

Section 2.1.9 Signal Design Elements – Intersection Signage

1. Added requirement for illuminated sign power and mounting locations.

Section 2.1.11 Signal Design Elements – Intersection Lighting

1. Added requirement for photocell location.

Section 2.4 Construction

1. Added requirement for pre-construction meeting.

Appendix H Traffic Signal Details and Specifications

1. Sheet 7: Revised the Ground Rod Detail to show decorative base.
2. Sheet 8: Revised Pole Handhole Detail to show decorative base.
3. Sheet 8: Added Developer Requirement notes.
4. Sheet 8: Changed 2" min. above finished grade to 1" min.

5. Sheet 9: Added four new general notes.
6. Sheet 9: Revised Lighting Fixture Schedule.
7. Added new Sheet 10 with Weatherproof Receptacle - Internal Base Location details.
8. Added new Sheet 11 with Weatherproof Receptacle - External Post Shaft Location details.
9. Added new Sheet 12 with Panelboard Schedule and Enclosure notes.
10. Added new Sheet 13 with Panel details.
11. Added new Sheet 14 with Panel Circuit details.
12. Added new Sheet 15 with Panel Circuit details.
13. Added new Sheet 16 with Pedestal details.
14. Added new Sheet 17 with Panel mounting details.

<u>Section 4 – Traffic Impact Studies</u>

Section 4.1.2 Traffic Impact Study Requirements – Applicability

1. Added requirement for updated traffic impact study if the development build-out is not completed within 10 years.

<u>Section 5 – Roadway Design</u>

Section 5.2.4.3 Roadway Design Elements – Sidewalks – Design Criteria

1. Added requirements for including driveway crossings.

Section 5.3.5 Roadway Design Elements – Intersection Design Elements – Left Turn Lane Warrants and Unsignalized Intersections

1. Modified left turn lane requirement.
2. Replaced with correct tables for Figure 5.3, 5.4, and 5.5.

Section 5.3.6 Roadway Design Elements – Intersection Design Elements – Right Turn Lane Warrants

1. Modified right turn lane requirement.

Section 5.3.7 Roadway Design Elements – Intersection Design Elements – Deceleration Lanes and Tapers

1. Modified deceleration lanes and taper requirements.

Section 5.4.2.4 Design of Utilities on Street Right of Way – General Requirements – Utility Patch Repairs

1. Added reference to section 5.5.2.

Section 5.5.2.1 Design of Pavements – Pavement Repairs/Retrofit – Asphalt

1. Modified depth requirement from four (4) inches to five (5) inches.
2. Clarified alternate permanent patch.

Section 5.6.4 Street Lighting – Decorative Pedestrian Lighting

1. Added reference to the Decorative Pedestrian Lighting Master Plan.

Appendix O Standard Drawings and Details

1. Sheet 1: Placed asterisk (*) to denote two equal lifts.
2. Sheet 1: Removed reference to ESAL Range C/D.
3. Sheet 4: Added note specifying deflection of water main.
4. Sheet 6: Modified Area to be milled.
5. Sheet 10: Added hatching to delineate concrete flume.
6. Sheet 10: Modified Swale title to Concrete Swale.
7. Sheet 11: Inserted reference to section 5.2.6 in note #3.
8. Sheet 11: Added note #10 referring to non-cub and gutter streets.
9. Sheet 11: Added hatching delineating concrete apron.
10. Sheet 11: Removed minimum dimension.
11. Sheet 14: Inserted “Current” to note #4.
12. Sheet 14: Removed reference to Parks and Recreations and Inserted Public Works Department in note #9.
13. Sheet 14: Clarified tack requirements in note #5.
14. Sheet 15: Referenced only Prowag Standards in note #3.
15. Sheet 15: Added note #4 referring to sidewalks adjacent to inlets.
16. Sheet 18: Clarified dimensions Right Alternate View detail.
17. Sheet 38: Clarified the Limits of Hydrant area.
18. Sheet 38: Inserted clarification for different street type width requirements.

Appendix P-4 Decorative Pedestrian Lighting Plan

1. Revised the map to include Addendums 1 and 2 showing locations along Opelika Road for the Decorative Pedestrian Lighting Master Plan.

Appendix R Storm Sewer Standard Details

1. Sheet 1: Modified details for traffic rated and non-traffic rated cast iron rings and cover.
2. Sheet 6: Changed Utility Conflict Manhole title to Utility Conflict Junction Box.
3. Sheet 6: Removed general sanitary sewer note from detail.
4. Sheet 6: Removed reference to Welded wire.
5. Sheet 6: Removed all references to cast iron steps.
6. Sheet 7: Added requirement for welded wire fabric in the sloped headwall detail.
7. Sheet 8: Removed reference to cast iron steps.
8. Sheet 8: Added note required traffic rated ring and cover.
9. Sheet 8: Added note recommending rebar in junction box top.
10. Sheet 9: Removed Plan view and Precast Manhole details.
11. Sheet 9: Removed reference to cast iron steps.
12. Sheet 9: Added title to Max. Pipe Size chart.

13. Sheet 10: Added “minimum” to Ditch width requirement.
14. Sheet 11: Removed all details related to Inlet With Gutter Detail.

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RESOLUTION NO. 19-338

WHEREAS, the City Council of the City of Auburn approved and adopted the Engineering Design and Construction Manual on November 2, 2010 with an effective date of January 1, 2011; and

WHEREAS, the City Engineer, in collaboration with the development community, finds it necessary to implement material changes (a copy of which is attached and made a part hereof) for clarification and to comply with rule changes in the industry and to make these changes effective January 1, 2020.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Auburn, Alabama does hereby approve and accept the changes to the Engineering Design and Construction Manual effective January 1, 2020.

ADOPTED AND APPROVED by the City Council of the City of Auburn, Alabama, this the 17th day of December 2019.

Mayor

ATTEST:

City Manager

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Summary of Proposed Changes to the Engineering Design & Construction Manual
December 2019

Section 1 – General Information

Section 1.3.4.1 Development Review Team – DRT Process Overview

1. Inserted paragraph for Large or Complex Projects.

Section 1.3.4.3 Development Review Team – DRT Submittal Requirements

1. Revised submittal requirements to require digital submittals in addition to hard copies.

Appendix B-1 – DRT Checklist for Site Development Construction Plans

1. Inserted additional notes for erosion control.

Appendix B-2 – DRT Checklist for Subdivision Construction Plans

1. Inserted additional notes for erosion control.

Section 2 – Traffic Signal Design Guidelines

Section 2.1.4 Signal Design Elements – Communications

1. Clarified network communication requirements.

Section 2.1.4.2 Signal Design Elements – Communications – New System Implementation

1. Specified Ethernet Field Switch Model.

Section 2.1.6 Signal Design Elements – Power Supply

1. Specified internal component route.

Appendix H – Traffic Signal Details and Specifications

1. Sheet 6: Added note specifying internal component route.

Section 3 – Traffic Calming

1. Removed all references to Public Works Department and replaced with Engineering Services Department.

Section 3.1 Traffic Calming Process Summary

1. Removed reference to Appendix I and added website location.
2. Inserted verbiage regarding traffic calming request re-submittals.

Section 3.4 Neighborhood Petitions and Cost Share

1. Removed verbiage regarding circulation of petition.

Appendix I – Traffic Calming Request Form

1. Delete form from manual. Online version is currently being utilized.

Section 5 – Roadway Design

Section 5.2.4.1 Roadway Design Elements – Streets

1. Added requirements for temporary turnarounds.

Section 5.2.4.3 Sidewalks

1. Removed reference to Appendix N and added website location.

Appendix K – Arterials Roads List

1. Updated the List to include new streets.

Appendix L – Collector and Residential Collector Road List

1. Updated the List to include new streets.

Appendix N – Request for Sidewalk Construction Form

1. Delete form from manual. Online version is currently being utilized.

Appendix O – Standard Drawings and Details

1. Sheet 12: Revised details with 2' green space options.
2. Sheet 13: Revised detail clarifying ramp locations.
3. Sheet 20: Modified dimension lines.
4. Sheet 29: Added note about utility conflicts.
5. Sheet 31: Revised detail with vertical tabs for frame installation.
6. Sheet 32: Revised detail with vertical tabs for frame installation.
7. Sheet 34: Replaced detail with new detail.
8. Added new Sheet 39 with planting details.
9. Added new Sheet 40 with planting details.
10. Added new Sheet 41 with planting details.
11. Added new Sheet 42 with planting details.
12. Added new Sheet 43 with planting details.
13. Added new Sheet 44 with planting details.
14. Added new Sheet 45 with planting details.
15. Added new Sheet 46 with planting details.
16. Added new Sheet 47 with planting details.

Appendix P – Request For installation of Traffic Signs

1. Updated Department information.

Appendix P-1 – Irrigation Policy

1. Updated Department information.

Appendix P-2 – Decorative Street Signs Policy

1. Updated Department information.

Appendix P-3 – Downtown Sidewalks and Pedestrian Lighting Map

1. Updated the map legend indicating sidewalk locations.
2. Added Residential Collector classification with sidewalk locations.

Appendix Q – Visual Inspection Checklist

1. Updated Department Information.

Appendix R- Storm Sewer Standard Details

1. Sheet 7: Added “minimum” to slope required for sloped headwall detail.

Appendix S – Stormwater Storage Facility Final Certification

1. Updated Department Information.

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RESOLUTION NO. 21-273

WHEREAS, the City Council of the City of Auburn approved and adopted the Engineering Design and Construction Manual on November 2, 2010 with an effective date of January 1, 2011; and

WHEREAS, the City Engineer, in collaboration with the development community, finds it necessary to implement material changes (a copy of which is attached and made a part hereof) for clarification and to comply with rule changes in the industry and to make these changes effective January 1, 2022.

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Auburn, Alabama does hereby approve and accept the changes to the Engineering Design and Construction Manual effective January 1, 2022.

ADOPTED AND APPROVED by the City Council of the City of Auburn, Alabama, this the 21st day of December 2021.

Mayor

ATTEST:

City Manager

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Pending Updates for the Engineering Design & Construction Manual
December 2021

Section 1 – General Information

Section 1.3.4.3 Development Review Team – DRT Submittal Requirements

1. Referenced the Auburn Permit Portal for submittals.
2. Revised application requirements for initial and final submittals.

Section 1.4.2.1 Project Completion Requirements - Submittals

1. Revised submittal packages to be digital.

Section 1.11.2.2 Updates and Waivers to the Manual

1. Inserted timeline of 30 days for the appeal.

Appendix B-1 – DRT Checklist for Site Development Construction Plans

1. Clarified and inserted additional submittal requirement for Electrical plans for required pedestrian lighting.

Appendix B-2 – DRT Checklist for Subdivision Construction Plans

1. Clarified and inserted additional submittal requirement for Electrical plans for required pedestrian lighting.

Appendix B-5 – DRT Meeting Waiver

1. Removed DRT Meeting Waiver form.

Section 2 – Traffic Signal Design Guidelines

Section 2.1.9 Signal Design Elements – Intersection Signage

1. Removed requirements for photoelectric cell control of luminaires at disconnect.

Section 2.1.10 Signal Design Elements – Pedestrian Signal

1. Inserted requirements for wiring standards of pedestrian signal heads.

Section 2.1.11 Signal Design Elements – Intersection Lighting

1. Revised location of luminaire photoelectric cells from base of disconnect to individual luminaire housing.

Section 2.2.3 Signal Timing – Signal Timing Plans

1. Added verbiage regarding coordinated signal systems.

Appendix H – Traffic Signal Details and Specifications

1. Reformatted all details to eliminate ambiguities.
2. Revised title to “Signal Details and Standard Drawings”.
    a. Revised Sheet 1 (2.03) Traffic Signal Signs: Inserted Flashing Yellow Signal Head and “Left Turn Yield On Flashing Yellow Arrow”.
    b. Added new detail (2.06) Typical Street Light Pole Detail.
    c. Added new Street Lighting Fixture Schedule to detail (2.07).

Section 3 – Traffic Calming

Section 3.1 Traffic Calming Process Summary

1. Revised the review period to two (2) years for non-warranted applications.
2. Clarified that construction will be scheduled by the Public Works Department.

Section 3.4.1 Neighborhood Petitions and Cost Share – Standard Materials

1. Revised the standards for materials and sign installation.

Section 3.4.2 Neighborhood Petitions and Cost Share – Standard Landscaping

1. Revised title to “Landscaping".
2. Revised the standards for landscaping of traffic circles.

Section 3.4.3 Neighborhood Petitions and Cost Share – Exceptions – Special Material/Landscaping Request

1. Clarified the requirement for maintenance agreements for decorative elements.

Section 3.5.2 Review and Analysis of Applied Solutions – Re-Evaluation

1. Revised the review period to two (2) years for new applications.

Section 4 – Traffic Impact Studies

Section 4.1.1 Traffic Impact Study Requirements - General

1. Added requirement to submit the Traffic Impact Study with or before DRT plan submission.

Section 4.2.13 Traffic Impact Study Procedures and Criteria – Mitigation Thresholds and Measures

1. Added verbiage for waiver submittals.

Section 5 – Roadway Design

Section 5.6 Street Lighting

1. Added requirements for LED street lighting.

Section 5.6.2 Standard Decorative Fixtures

1. Clarified maintenance responsibility of the servicing authority.
2. Removed developer submitted lighting plans.

Section 5.6.3 Street Lighting – Specialized Decorative Fixtures

1. Changed the name of Section to “Light Plan Approvals”.
2. Revised the Developer and submittal requirements.

Section 5.6.4 Decorative Pedestrian Lighting

1. Clarified submittals.

Appendix K – Arterial Roads List

1. Removed U.S. Highway 280 and created new Highway Roads List.

Appendix L – Collector and Residential Collector Road List

1. Updated the List to include new streets.

Appendix M – Local Commercial / Local Streets/ Cul-De Sacs/Alleys List

1. Updated the List to include new streets.

Appendix O – Standard Drawings and Details

1. Reformatted all details to eliminate ambiguities.
2. Revised title to “Street Details and Standard Drawings”.
    a. Revised Sheet 9 (5.04): Header Curb Detail.
    b. Revised Sheet 13 (5.07): Driveway / Sidewalk Without Greenspace Detail.
    c. Revised Sheet 18 (5.14): Hand Rail Detail.
    d. Revised Sheet 34 (5.22): Tree Grate Detail.

Appendix R – Storm Sewer Standard Details

1. Reformatted all details to eliminate ambiguities.
    a. Revised Sheet 7 (7.12): Sloped Paved Headwall Detail.

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RESOLUTION NO. 24-033

WHEREAS, the City Council of the City of Auburn approved and adopted the Engineering Design and Construction Manual on November 2, 2010 with an effective date of January 1, 2011; and

WHEREAS, the City Engineer, in collaboration with the development community, finds it necessary to implement material changes (a copy of which is attached and made a part hereof) for clarification and to comply with rule changes in the industry and to make these changes effective March 1, 2024.

NOW THEREFORE, BE IT RESOLVED that the City Council of the City of Auburn, Alabama does hereby approve and accept the changes to the Engineering Design and Construction Manual effective March 1, 2024.

ADOPTED AND APPROVED by the City Council of the City of Auburn, Alabama, this the 20th day of February 2024.

Mayor

ATTEST:

City Manager

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Summary of Proposed Changes to the Engineering Design & Construction Manual
March 2024

Section 1 – General Information

Section 1.2.5 Definitions

1. Updated the Development Review Team (DRT) definition.

Section 1.3.4 Development Review Team (DRT)

1. Additional Permit Portal information has been provided.
2. The DRT review process timeframes have been revised.
3. Added a requirement to provide written comment responses.

Section 1.3.4.6 DRT Process Flowchart

1. The DRT process flowchart has been updated.

Appendix B-1 – DRT Checklist for Site Development Construction Plans

1. Modified a note related to trees near utilities.

Appendix B-2 – DRT Checklist for Subdivision Construction Plans

1. Modified a note related to trees near utilities.

Section 5 – Roadway Design

Section 5.2.4.1 Streets

1. Clarified when temporary turnarounds are required on street stub-outs.

Section 5.2.4.3 Sidewalks

1. References to PROWAG have been updated.
2. Added criteria for upsizing existing sidewalk for new or redevelopments.
3. Clarified that tree wells may be waived where there are no sidewalks.

Section 5.2.6.1 Design Criteria (Driveways)

1. Specified the maximum width for residential driveways.

Section 5.2.6.3 Driveway Spacing

1. Edited text for clarity.

Section 5.3.2.3 Islands

1. Clarified irrigation in the right-of-way.

Section 5.3.3 Sight Distance

1. Clarification was added for the design speed.

Section 5.3.7 Deceleration Lanes and Tapers

1. The overlay thickness was modified.

Section 5.3.8 Deceleration Lanes and Tapers

1. Text was removed to clarify turn lane requirements.

Section 5.6.4 Decorative Pedestrian Lighting

1. Specified red continuous-run conduit for lighting.

Appendix L – Collector and Residential Collector Road List

1. Updated the list to include new streets and remove streets no longer applicable.

Appendix O – Standard Drawings and Details

1. Detail 5.01
    a. Revised Driveway Cross Section.
    b. Revised shoulder width.
2. Detail 5.02 – Revised shoulder width.
3. Detail 5.06
    a. Made a grammatical correction.
    b. Updated the overlay thickness.
4. Detail 5.08 – Specified the maximum driveway width for residential uses.
5. Detail 5.12 – Updated the PROWAG reference.
6. Detail 5.14 – Added Black Powder Coat requirement for sidewalk guardrail.
7. Detail 5.35 – Made a grammatical correction.

Section 6 - Geotechnical

Section 6.3.4 Design and Safety Requirements

1. Changed Public Works Department to Engineering Services Department.

Section 7 – Drainage

Section 7.3.6.4 Minimum Clearances

1. Added text for clarification of vertical clearance minimums.

Section 7.4.5 Operation & Maintenance

1. Clarified recording of the Stormwater O & M Agreement.

Appendix R – Storm Sewer Details and Standard Drawings

1. Detail 7.08 – Added clarification to the HDPE note.

APPENDIX F. Traffic Signal Plans Submittal Checklist

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City of Auburn

City of Auburn Traffic Signal Plans Submittal Checklist

This checklist must be submitted with every set of plans for traffic signals improvements. All items on the checklist shall be addressed. If the item is not applicable to this project check the box next to the item labeled "N/A", and provide comment. Items preceded by an asterisk (*) are required for the submittal to be considered complete. If one of these items is missing from the submittal without a valid explanation, the entire submittal will be rejected. Note that this checklist is not intended to be all-inclusive, and fulfillment of this checklist does not alleviate the obligation of the designer to meet all City of Auburn code, regulations, ordinances, and specifications. The purpose of this checklist is to facilitate a more efficient plan review process for the designer and the review team.

	Description	Check	N/A	Comments
	Required Plan Sheets			
	These are the basic sheets we expect to see in a set of plans. Some sheets may be combined on certain projects, or have different names (for example, storm water profiles shown on the street plan & profile sheets).			
*	Traffic Signal Notes Sheet			
*	Signal Plan Sheets			
*	Installation Notes			
*	Standard Details and Drawings Sheets			
*	Coordination Plan Sheets			
	Signal Support			
Signal Support - Signal Suppor	Galvanized Steel Poles			
	Powder Coat Gloss Black finish			
	Smooth Pole (not fluted)			
	Smooth, Arched Mast Arm			
	Gloss Black Decorative Top included			
	Gloss Black Decorative Base included			
	Black Ball on Decorative top			
	Cabinet			
Cabinet	Auburn Spec Cabinet (not ALDOT)			
	Painted Black			
	UPS included			
	8-Phase NEMA Compatible Controller included			
	Ground Mounted Cabinet			
	Interconnect Components specified			
	Preemption Requirements specified			
	Power Supply			
Power supply - P	Underground Service designed			
	Future Service Corner/Disconnect Location shown			
	Verified with ALPCo			
	Show existing topography with clearly labeled contours lines			
	Signal Heads			
Signal H	Yellow, Aluminum, 12inch signal heads			
	Gelcore ELD specified			
	Pedestrian Signals			
Pedestrian Signal	Black, Aluminum heads			
	LED			
	Countdown style			
	Audible pedestrian buttons			
	Signage			
Signage	Overhead Blue Street Name Signs specified			
	Overhead Turn Signs specified			
	Overhead Lane Control Signs required			
	Signal Ahead Signs required			
	Luminaries			
Luminaries	Black, 250 W HPS over each stop bar			
	Cut-off style Cobra Head Fixutre			
	12' Luminaire Arm			
	Plans			
s-Plans-Plans	Traffic Signal Notes Sheet			
	Signal Plan Sheets			
	intersection geometry shown			
	utilities shown			
	pavement markings shown			
	right of way shown			
	Installation Notes Specified for the following:			
	controller/cabinet specs			

	Description	Check	N/A	Comments
Plans-Plans-Plans-Plans-Plans-Plans-Plans-Plans-Plans-Plans	electrical service			
	junction boxes			
	detection			
	references			
	speed limits			
	flash pattern			
	Signal Head Display shown			
	Detection shown (cameras on mast arms)			
	Signage Display shown			
	Pre-emption phasing diagram shown			
	signal sequence chart included			
	conflict monitor chart included			
	wiring diagram and table included			
	materials list included			
	timing plan provided			
	Standard Details and Drawings Sheets			
	Coordination Plan Sheets			
Construction				
Construction	Materials Submittals included for the following:			
	pole design			
	pole foundation designs			
	cabinet and controller equipment			
	signal heads and mounting hardware			
	pedestrian heads and mounting hardware			
	testing reports			

SIGNED: _____
(engineer of record)

ENGINEER'S SEAL:

APPENDIX G. Traffic Signal Notes

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APPENDIX G. Traffic Signal Notes

Pavement markings shown are for illustrative purposes unless otherwise noted.

Controller shall be capable of running pedestrian phases.

Mast arm pole shall be galvanized steel, smooth, round poles (not fluted) with an arched mast arm and a powder coated gloss black (P33) finish.

The contractor shall not order the traffic signal material until the shop drawings and design calculations have been reviewed by the City of Auburn and written approval granted.

Poles shall include ornamental pole base and top as per City of Auburn standard.

Ball at top of crown shall be black.

The traffic signal pole assembly includes the pole structure, mast arm, decorative pole base, decorative pole top, luminaire arm and assembly, and miscellaneous hardware incidentals for a complete mast arm pole installation.

Cost of mast arm installation shall include all miscellaneous items, such as washers, bolts and all incidental items to have a complete installation.

Signal heads shall have a minimum clearance of 17′ from the bottom of the signal head to the roadway.

Signal heads shall be yellow.

Signal heads shall be 12″ LED's.

Luminaire assembly shall be gloss black Phillips Roadstar 130W98LED4K or approved equal.

Pedestrian signal housing shall be gloss black.

Pedestrian signals shall be led countdown signal heads (Lumination PS7-CFF1-01A-18).

Pedestrian pole shall be Holophane Wadsworth Aluminum Sitelink pole (or approved equal) with a powder coated gloss black finish.

Pedestrian signal head clamshell bracket shall be bolted to the pole, not banded.

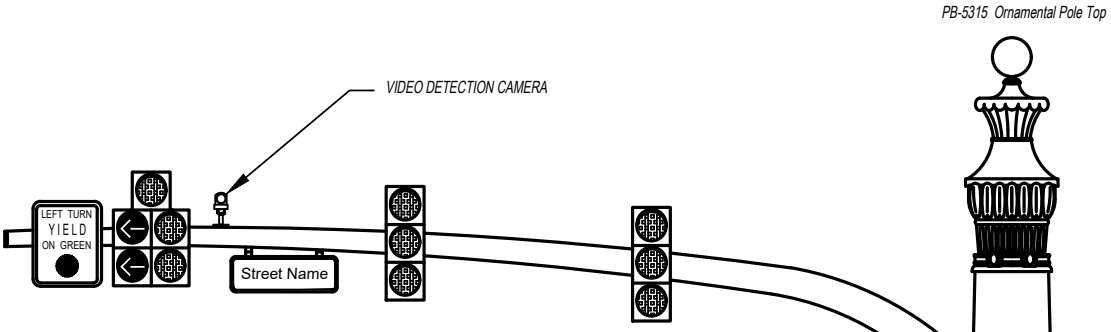
Uninterruptable power systems (battery back-up systems Clary SP 1000SN+) using the OP72C battery are required for all intersections. The entire ups system and batteries shall be housed in the standard City of Auburn traffic signal controller cabinet unless otherwise approved.

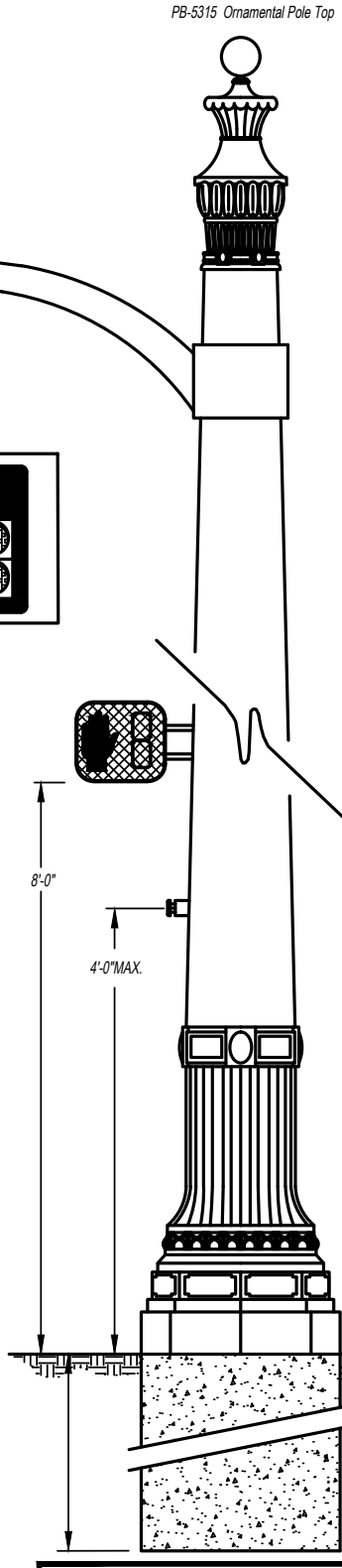
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APPENDIX H. Signal Details and Standard Drawings

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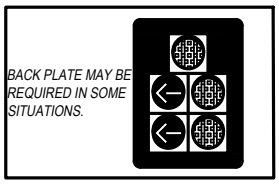
DECORATIVE MAST ARM DETAILS





TYPICAL BEST ALIGNMENT FOR SIGNAL MAST ARM INSTALLATION IS LINING UP THE CAMERA IN LINE WITH THE LANE LINE BETWEEN THE LEFT TURN AND THROUGH LANES LEFT TURN DETECTION.



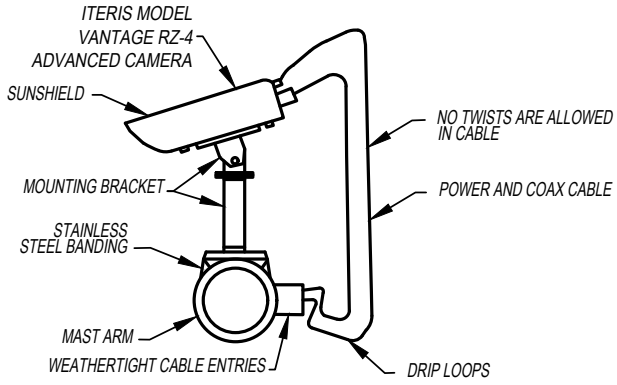


AP-0802 Ornamental Pole Base Fits 8"-12" Dia. Poles -or- PB-5381 Ornamental Base Fits 18"-26" Dia. Poles .

The location of strain poles and mast arm poles shall be in compliance with the AASHTO Roadside Design Guide and ALDOT standards, and approved by the City Engineer.

Concrete for foundations shall comply with the requirements for Class A, Type 2a concrete. Reinforcing steel shall meet the requirements for steel reinforcement and shall be Grade 60 (400) billet steel. Minimum design wind speed shall be based on ALDOT standards. All materials and equipment furnished shall be new, except when the plans specifically provide for there-use of existing equipment.

VIDEO DETECTION CAMERA MOUNTING DETAIL



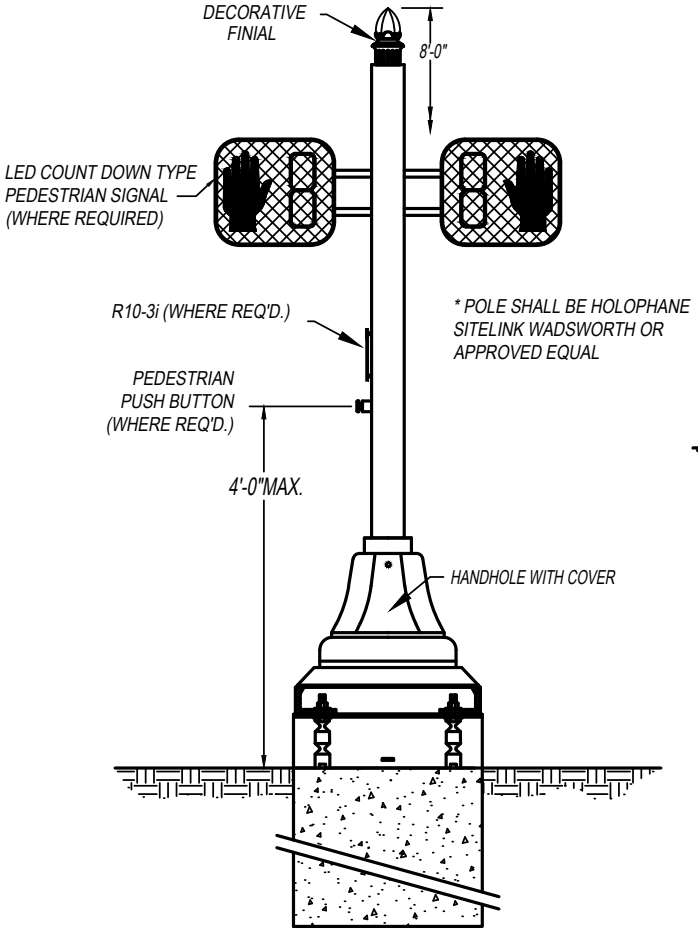
* CABLES SHALL BE ROUTED THROUGH BLACK POLE BRACKET OFF THE BACK OF THE MAST ARM.

STANDARD DETAILS: TRAFFIC	2.00

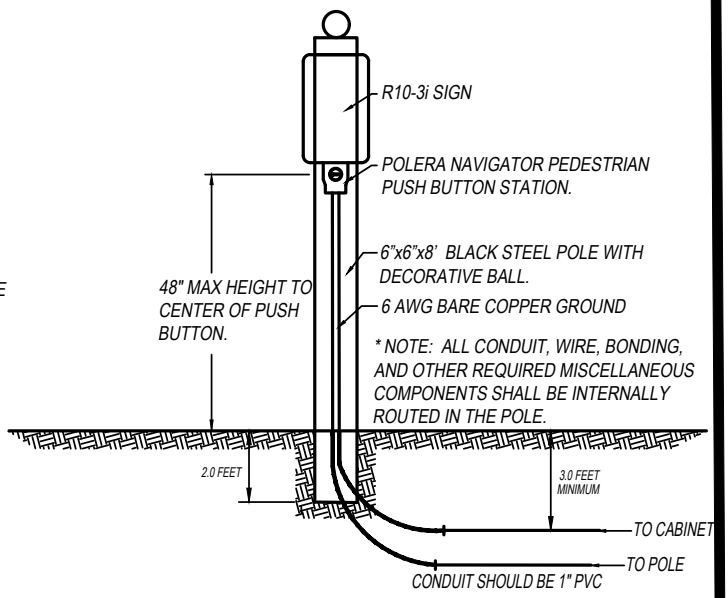
City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

PEDESTRIAN POLE INSTALLATION DETAIL



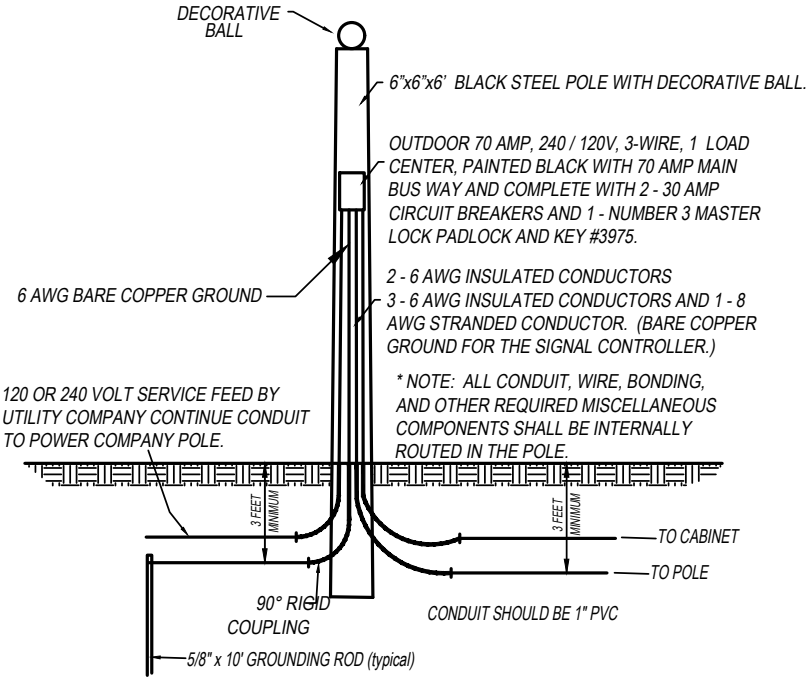
PEDESTRIAN PUSH BUTTON DETAIL



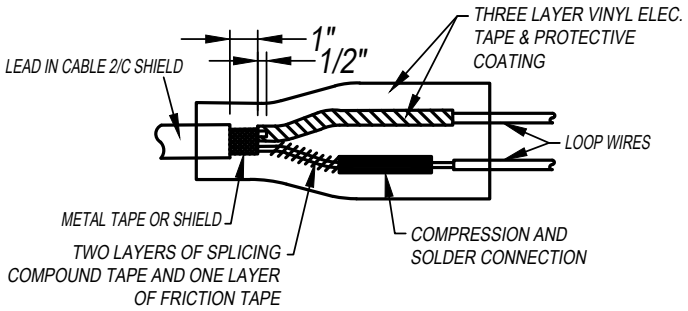
STANDARD DETAILS: TRAFFIC	2.01
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

City of Auburn

UNDERGROUND POWER SOURCE FOR COMBINATION TRAFFIC SIGNAL AND STREET LIGHTING POLES



LOOP SPLICING DETAIL



STANDARD DETAILS: TRAFFIC	2.02
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

TYPICAL TRAFFIC SIGNAL SIGNS AND HEADS

DETAIL OF TYPICAL TRAFFIC SIGNAL SIGNS



R10-10(L)
24" x 30"



R10-10(R)
24" x 30"



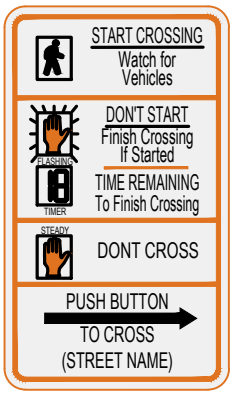
R10-11a
24'x 30"



R10-12
24" x 30"



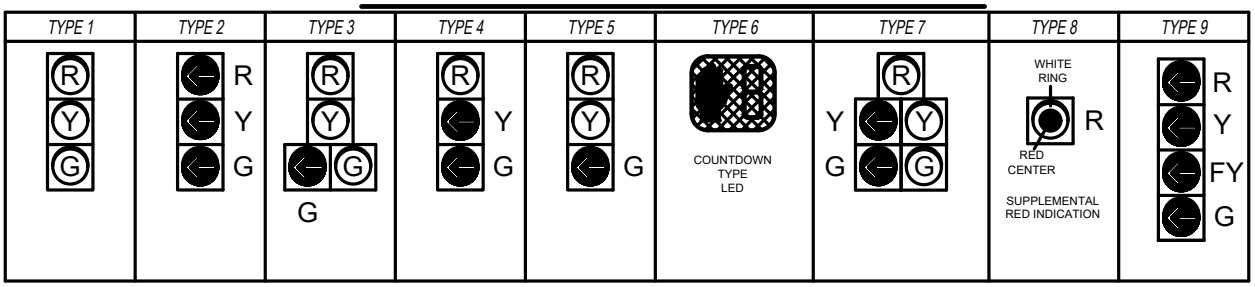
R10-12a
30" x 36"



Street name shall be included in braille on the face of the sign. **

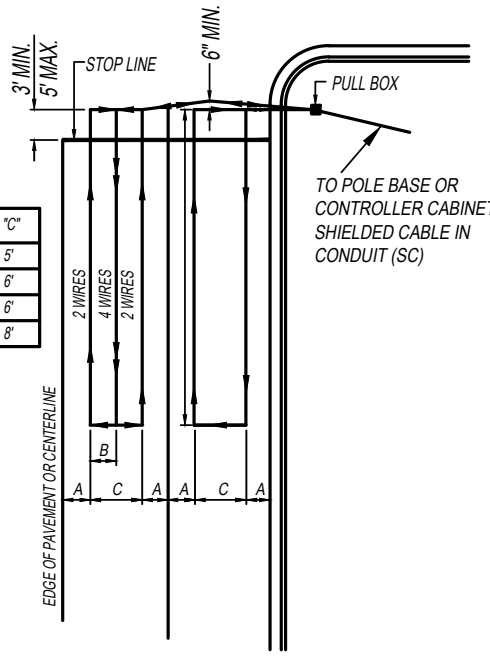
R10-3i **
9" x 15"

DETAIL OF TYPICAL TRAFFIC SIGNAL HEADS



STANDARD DETAILS: TRAFFIC	2.03
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

LARGE LOOP DETECTOR INSTALLATION DETAIL

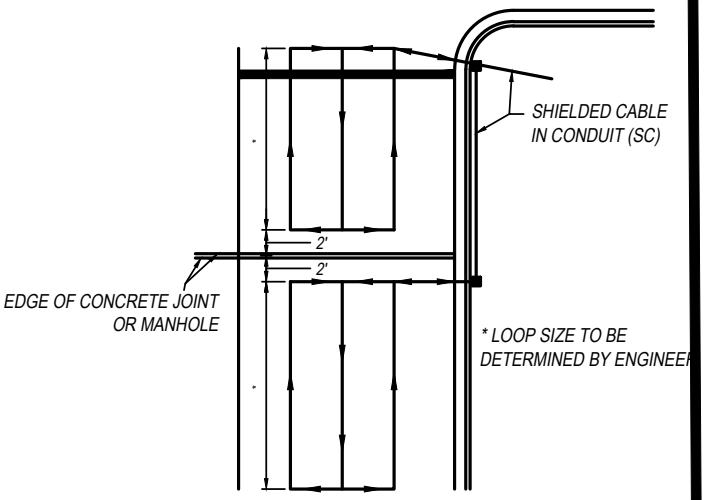


LANE WIDTH	"A"	"B"	"C"
10'	2.5'	2.5'	5'
11'	2.5'	3'	6'
12'	3'	3'	6'
14'	3'	4'	8'

MINIMUM LOOP SEPARATION WHEN NO LANE LINES ARE PRESENT IS 3'

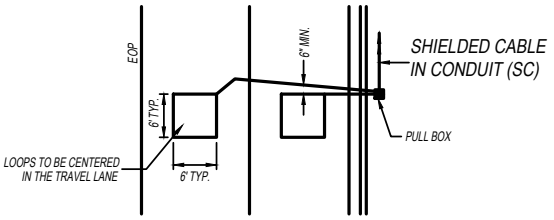
ALL LOOPS ARE 40' IN LENGTH UNLESS OTHERWISE SPECIFIED.

TYPICAL DETAIL OF LOOP DECTECTOR WHERE TRANSVERSE CONCRETE JOINTS, MANHOLES ETC. ARE ENCOUNTERED



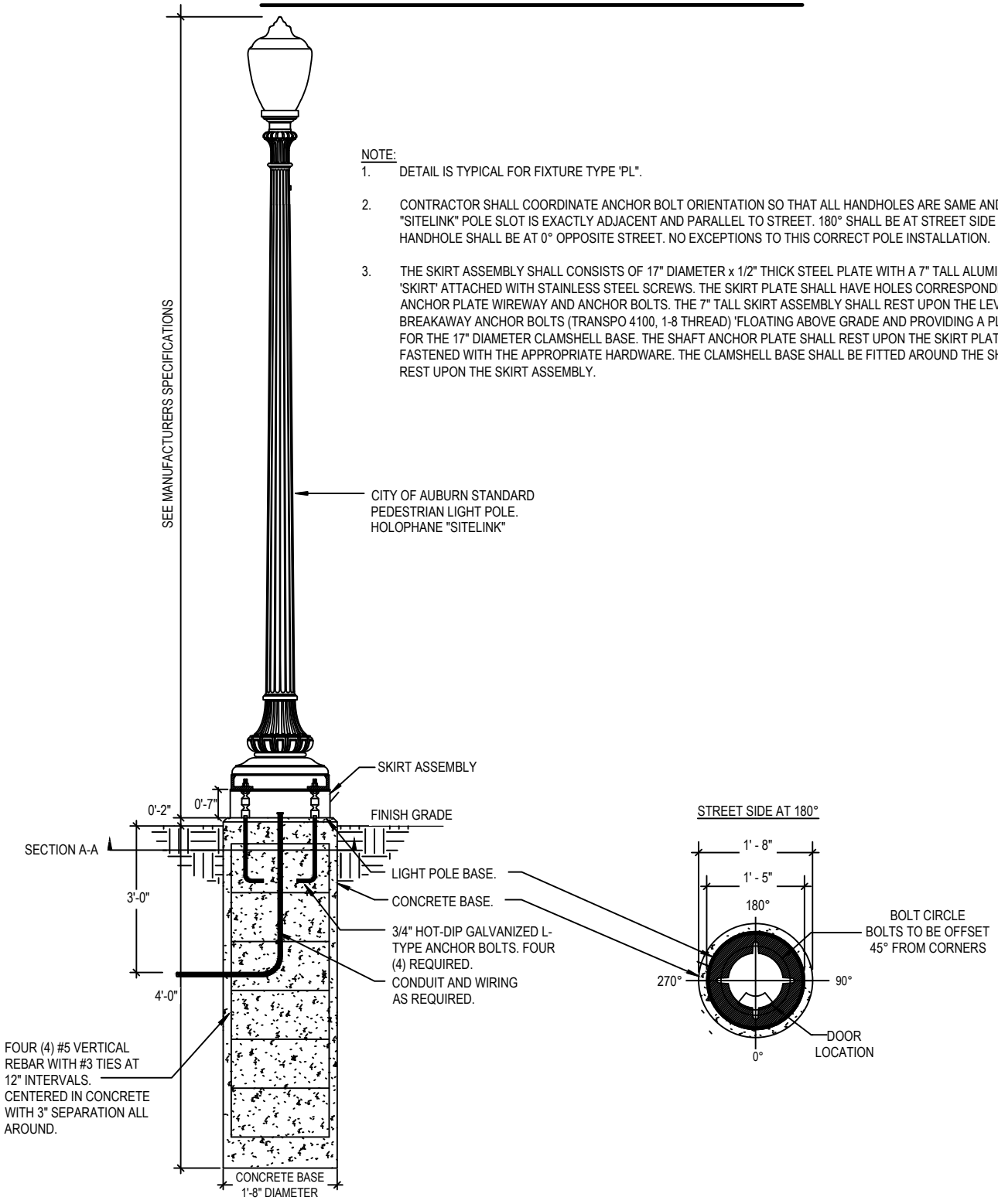
NOTE:
NO LOOPS ARE TO BE INSTALLED THROUGH, OVER, OR UNDER TRANSVERSE CONCRETE JOINTS IN CONCRETE PAVEMENT, AND NO MANHOLES, INLETS, ETC. MAY BE LOCATED WITHIN A LOOP. IF ANY OF THE ABOVE ARE ENCOUNTERED THE LOCATION OF THE LOOP MAY BE VARIED SLIGHTLY AS DIRECTED BY THE ENGINEER. IF THE ABOVE ITEMS ARE UNAVOIDABLE, SMALLER LOOPS AS SHOWN TO THE RIGHT MAY BE USED. SMALLER LOOPS USED TO REPLACE ONE LARGE LOOP MAY BE CONNECTED TO ONE CHANNEL.

SMALL LOOP DETECTOR INSTALLATION DETAIL



STANDARD DETAILS: TRAFFIC	2.04
City of Auburn	
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DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
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IMPLEMENTED: 01-01-2022	

TYPICAL PEDESTRIAN LIGHT POLE DETAIL

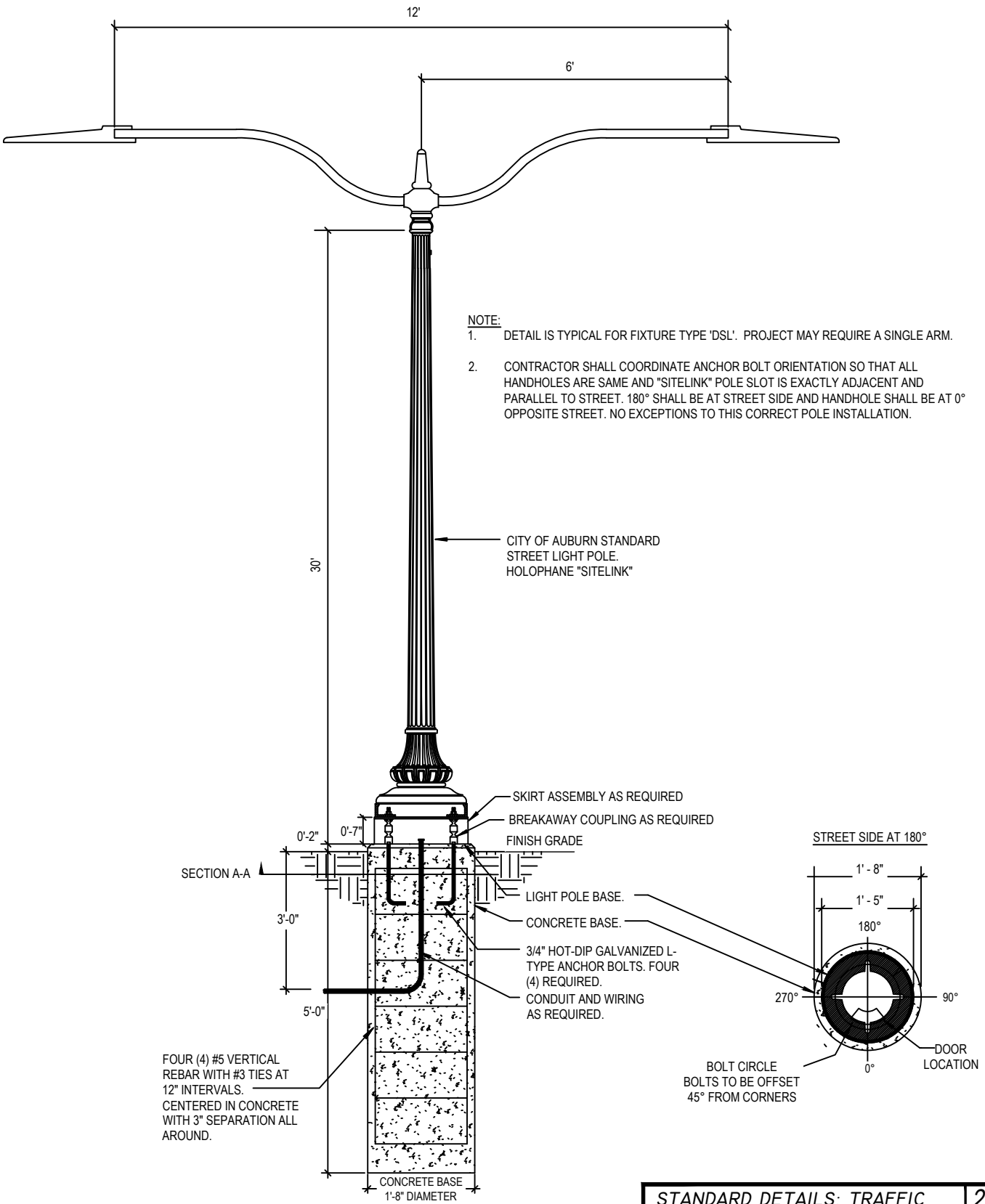


NOTE:

1. DETAIL IS TYPICAL FOR FIXTURE TYPE 'PL".
2. CONTRACTOR SHALL COORDINATE ANCHOR BOLT ORIENTATION SO THAT ALL HANDHOLES ARE SAME AND "SITELINK" POLE SLOT IS EXACTLY ADJACENT AND PARALLEL TO STREET. 180° SHALL BE AT STREET SIDE AND HANDHOLE SHALL BE AT 0° OPPOSITE STREET. NO EXCEPTIONS TO THIS CORRECT POLE INSTALLATION.
3. THE SKIRT ASSEMBLY SHALL CONSISTS OF 17" DIAMETER x 1/2" THICK STEEL PLATE WITH A 7" TALL ALUMINUM 'SKIRT' ATTACHED WITH STAINLESS STEEL SCREWS. THE SKIRT PLATE SHALL HAVE HOLES CORRESPONDING TO THE ANCHOR PLATE WIREWAY AND ANCHOR BOLTS. THE 7" TALL SKIRT ASSEMBLY SHALL REST UPON THE LEVEL BREAKAWAY ANCHOR BOLTS (TRANSPO 4100, 1-8 THREAD) 'FLOATING ABOVE GRADE AND PROVIDING A PLATFORM FOR THE 17" DIAMETER CLAMSHELL BASE. THE SHAFT ANCHOR PLATE SHALL REST UPON THE SKIRT PLATE, FASTENED WITH THE APPROPRIATE HARDWARE. THE CLAMSHELL BASE SHALL BE FITTED AROUND THE SHAFT AND REST UPON THE SKIRT ASSEMBLY.

STANDARD DETAILS: TRAFFIC	2.05
City of Auburn	
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APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

TYPICAL STREET LIGHT POLE DETAIL



NOTE:

1. DETAIL IS TYPICAL FOR FIXTURE TYPE 'DSL'. PROJECT MAY REQUIRE A SINGLE ARM.
2. CONTRACTOR SHALL COORDINATE ANCHOR BOLT ORIENTATION SO THAT ALL HANDHOLES ARE SAME AND "SITELINK" POLE SLOT IS EXACTLY ADJACENT AND PARALLEL TO STREET. 180° SHALL BE AT STREET SIDE AND HANDHOLE SHALL BE AT 0° OPPOSITE STREET. NO EXCEPTIONS TO THIS CORRECT POLE INSTALLATION.

STANDARD DETAILS: TRAFFIC	2.06
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
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IMPLEMENTED: 01-01-2022	

TYPICAL LIGHT POLE SPECIFICATION

DEVELOPER REQUIREMENTS

1. THE DEVELOPER WILL BE RESPONSIBLE FOR THE INDIVIDUAL DESIGNS OF EACH ENCLOSURE AREA OR INCORPORATING LIGHTING INTO THE EXISTING ENCLOSURE AREA DESIGNS.

2. REFER TO SECTION 5.6 "STREET LIGHTING IN THE CITY OF AUBURN ENGINEERING DESIGN AND CONSTRUCTION MANUAL FOR FULL REQUIREMENTS.

3. PROVISIONS FOR FUTURE FIXTURES LOCATIONS ASSIGNED TO THE ENCLOSURE MUST BE ACCOMMODATED IN THE ELECTRICAL DESIGN. THIS MAY INCLUDE BUT NOT LIMITED TO, INCREASED CONDUIT SIZE, SPARE CONDUIT, INCREASE WIRE SIZE, SPARE WIRE, JUNCTION BOXES, WIRE LABELS AT ALL JUNCTIONS, STUB OUTS, AND OTHER MISCELLANEOUS ACCOMMODATIONS.

4. DEVELOPER MUST CONFIRM IF ANY OF MASTER PLAN WORK HAS BEEN DONE AT HIS SPECIFIC LOCATION. VERIFY IF PANEL ENCLOSURE HAS BEEN INSTALLED AND ANY POLE LIGHTS THAT MAY BE IN PLACE. COORDINATE ALL NEW ELECTRICAL WORK WITH OWNER REPRESENTATIVE.

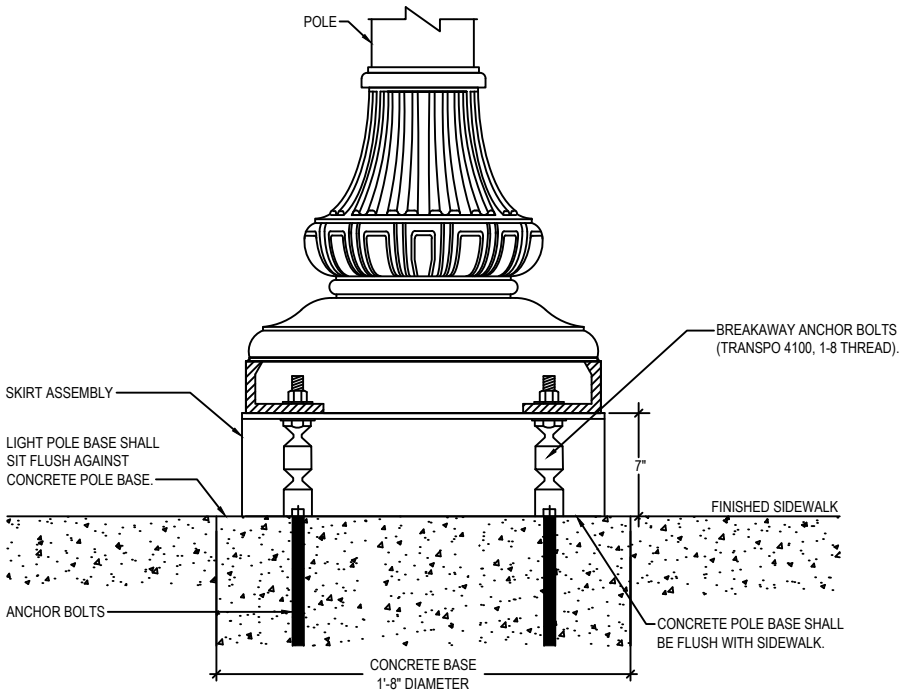
PEDESTRIAN LIGHTING FIXTURE SCHEDULE

SYMBOL	MANUFACTURER & CATALOG NUMBER	LAMP	WATTS	MOUNTING	VOLTS	REMARKS
PL ⊕	HOLOPHANE GVD3-P30-40K-MVOLT-SPL-GL3-BK (LIGHT FIXTURE) WDA-12-SL4-17D-C03-BWKT-BK-ABG (POLE)	LED 4000K	60	POLE	120	DECORATIVE LED LUMINAIRE WITH: CAST ALUMINUM HOUSING (BLACK FINISH); BOROSILICATE GLASS REFRACTOR; TYPE 3 DISTRIBUTION; INTEGRAL 400 MILLI-AMP LED DRIVER. MOUNT FIXTURE ON 12' STRAIGHT ALUMINUM, SITELINK POLE.
PB ⊕	HOLOPHANE GVD3-P30-40K-MVOLT-SPL-GL3-BK (LIGHT FIXTURE) WDA-12-FTJ-19S-C03-BK-ABG (POLE) FPH-3BO FLAG POLE HOLDER	LED 4000K	60	POLE	120	DECORATIVE LED LUMINAIRE WITH: CAST ALUMINUM HOUSING (BRONZE FINISH); BOROSILICATE GLASS REFRACTOR; TYPE 3 DISTRIBUTION; INTEGRAL 400 MILLI-AMP LED DRIVER. MOUNT FIXTURE ON 12' CLASSIC TAPERED AND FLUTED ALUMINUM POLE WITH BRONZE FINISH, WITH RECEPTACLE INSIDE HANDHOLE AND ONE NEAR TOP OF POLE. FLAG POLE HOLDER AT 96" A.F.G.
PLR ⊕	HOLOPHANE GVD3-P30-40K-MVOLT-SPL-GL3-BK (LIGHT FIXTURE) WDA-12-SL4-17D-C03-BWKT-BK-FGB-R132 (POLE)	LED 4000K	60	POLE	120	DECORATIVE LED LUMINAIRE WITH: CAST ALUMINUM HOUSING (BLACK FINISH); BOROSILICATE GLASS REFRACTOR; TYPE 3 DISTRIBUTION; INTEGRAL 400 MILLI-AMP LED DRIVER. MOUNT FIXTURE ON 12' STRAIGHT ALUMINUM, SITELINK POLE WITH RECEPTACLE INSIDE HANDHOLE AND ONE AT 11'-0" ABOVE BOTTOM OF POLE.

STREET LIGHTING FIXTURE SCHEDULE

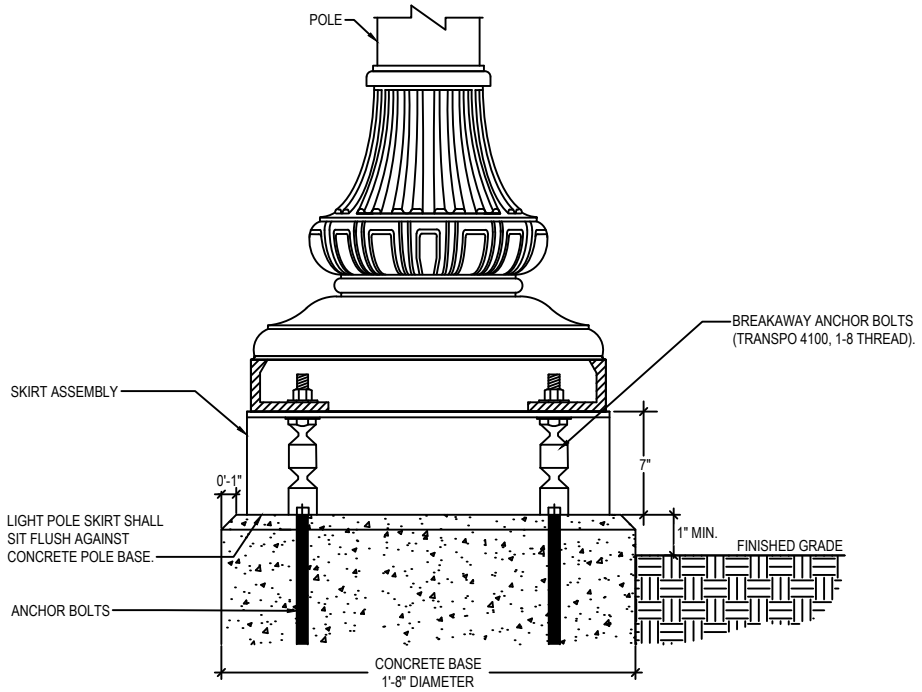
SYMBOL	MANUFACTURER & CATALOG NUMBER	LAMP	WATTS	MOUNTING	VOLTS	REMARKS
DSL	HOLOPHANE ATB0 P304 MVOLT R3 BK P7 (LIGHT FIXTURE - (2)) WDA 30 SL6 17D C05 BK RP132A, BHC 72IN 2A TN SL6 BK, FGIUS, BWKT 1700R 1200BC 100AB, TRANSPO, AB RFD325929 (POLE (1) & ROADWAY ARM (2)).	LED 4000K	124	POLE	120	"AUTOBAHN" LED LUMINAIRE (2@180°) WITH CAST ALUMINUM HOUSING, BLACK FINISH, TYPE III DISTRIBUTION, INTEGRAL LED DRIVER, 30' DECORATIVE POLE & BASE. RECEPTACLE INSIDE HANDHOLE AND TOP OF POLE. 6' ROADWAY ARM (2).

POLE BASE DETAIL



POLEBASE INSTALLED ON SIDEWALK

ENLARGED TYPICAL POLEBASE DETAIL



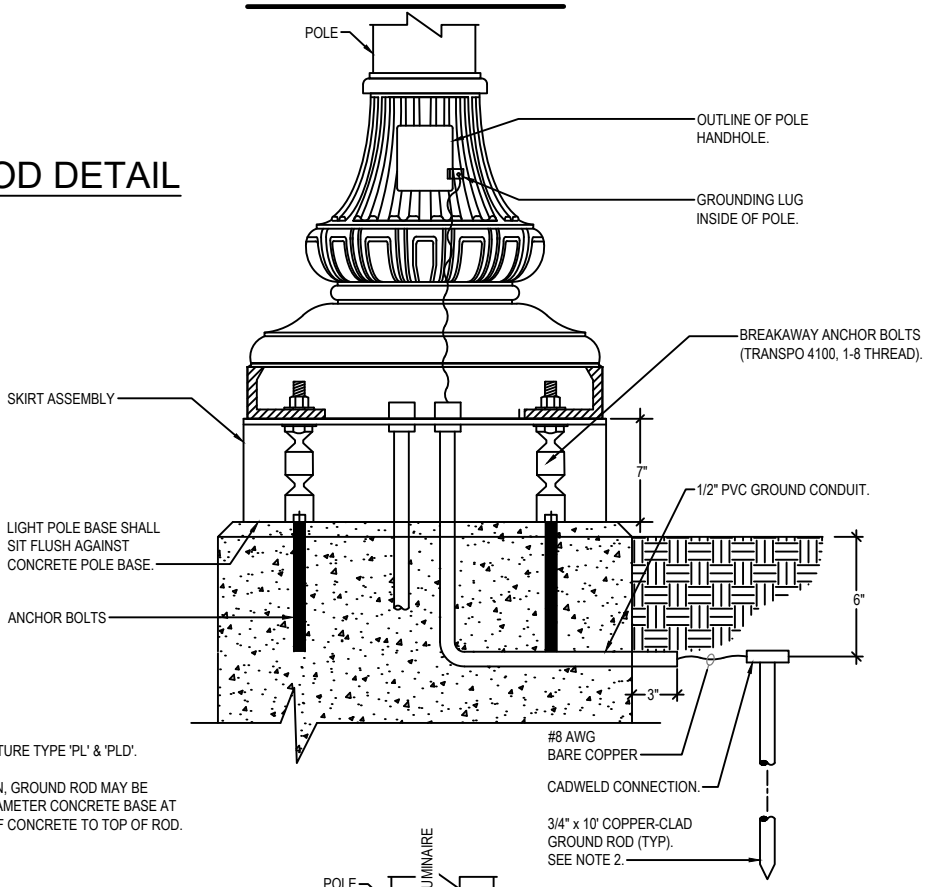
POLEBASE INSTALLED ON GRADE

ENLARGED TYPICAL POLEBASE DETAIL

STANDARD DETAILS: TRAFFIC	2.08
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
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IMPLEMENTED: 01-01-2022	

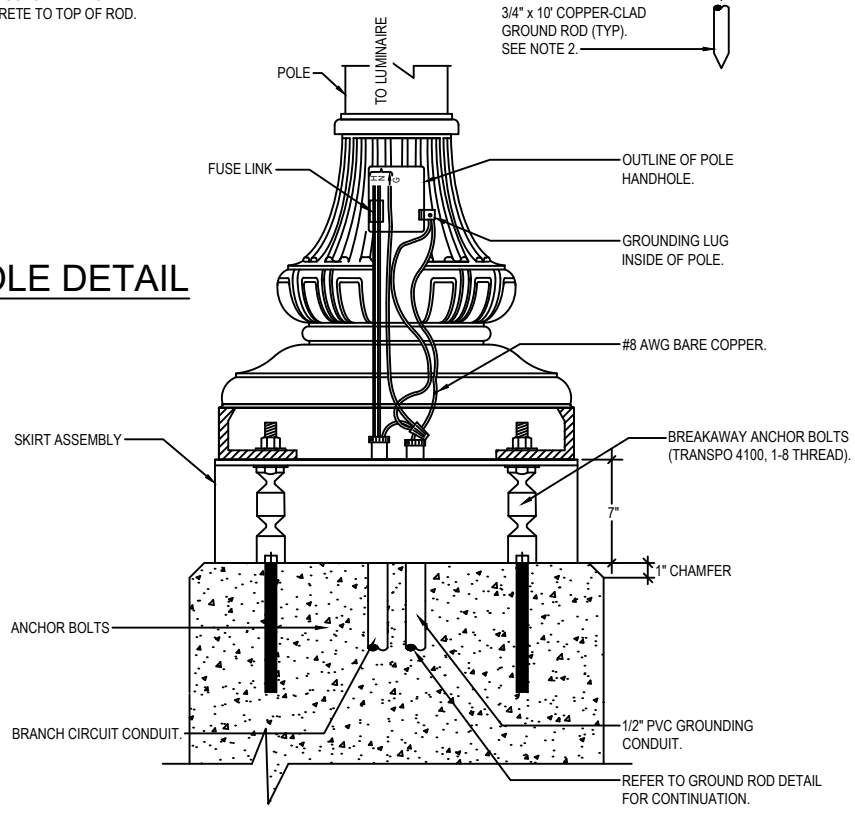
POLE BASE DETAIL

GROUND ROD DETAIL



NOTE:
1. DETAIL TYPICAL FOR FIXTURE TYPE 'PL' & 'PLD'.
2. AT CONTRACTOR OPTION, GROUND ROD MAY BE INSTALLED INSIDE 20" DIAMETER CONCRETE BASE AT LEAST 18" BELOW TOP OF CONCRETE TO TOP OF ROD.

POLE HANDHOLE DETAIL



NOTE:
1. DETAIL TYPICAL FOR FIXTURE TYPE AS REQUIRED.

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APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

City of Auburn

ELECTRICAL NOTES

ENCLOSURE NOTES

1. ENCLOSURE SHALL BE FREESTANDING ON CONCRETE PAD, RAINPROOF-NEMA 3R, STEEL (G90), PAINTED BLACK (RAL 9017), HINGED AND LOCKABLE OUTSIDE DOOR, HINGED DEAD-FRONT INSIDE COVER. ALL INTERNAL WIRING AND CONNECTIONS SHALL BE BY MANUFACTURER. MUST BE UL "SERVICE ENTRANCE" RATED. SIZE AS REQUIRED. ALL CIRCUIT BREAKERS (MAIN & BRANCH) AND H-O-A SWITCH SHALL BE ACCESSIBLE INSIDE ENCLOSURE WITH DEAD-FRONT COVER CLOSED. MILBANK OR APPROVED EQUIVALENT.
2. CONTACTOR SHALL BE 100 AMP 2 POLE. ELECTRICALLY HELD WITH 120 VOLT COIL, OPEN TYPE. THIS CONTACTOR SHALL CONTROL "ON-OFF" OF ALL CIRCUITS IN PANEL 'SL'.
3. HAND-OFF-AUTO (H-O-A) SWITCH SHALL BE 120 VOLT 20 AMP RATED AND SHALL OPERATE AS FOLLOWS:

   "HAND"- CONTACTOR IS CLOSED AND PANEL 'SL' IS ENERGIZED.

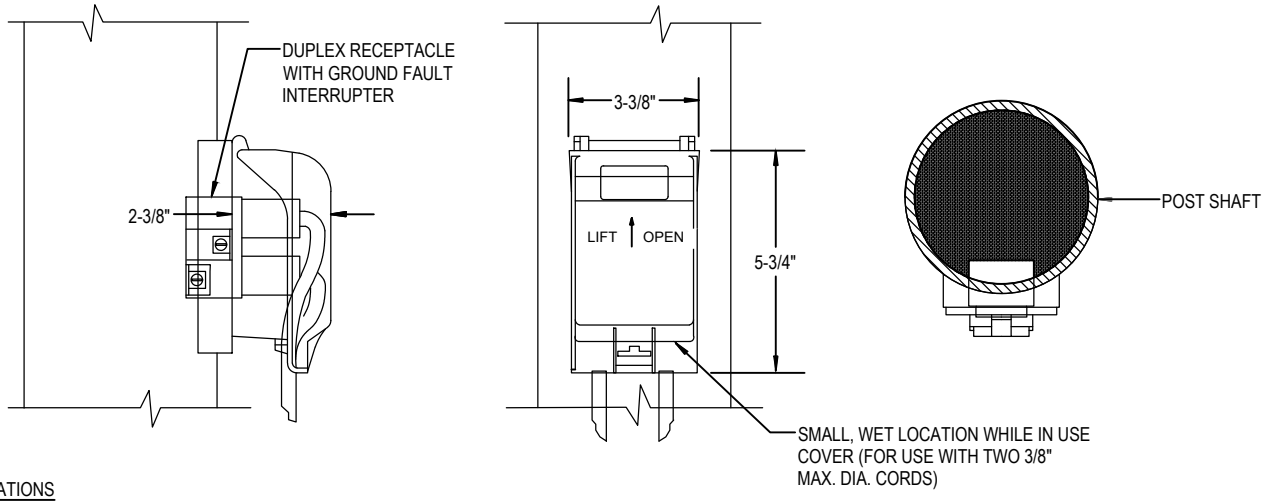
   "OFF"-CONTACTOR IS OPEN AND PANEL 'SL' IS DEENERGIZED.

   "AUTO"-PHOTOCELL CONTROLS CONTACTOR AND "ON-OFF" OF PANEL 'SL'.
4. PHOTOCELL SHALL BE SPST 120 VOLT TO CONTROL CONTACTOR AND "ON-OFF" OF PANEL 'SL'. PHOTOCELL SHALL BE MOUNTED INSIDE OF ENCLOSURE WITH GLASS WINDOW TO DETECT OUTSIDE LIGHT.
5. CIRCUIT BREAKER (SIZE AS NOTED), SEPARATE OPEN TYPE, 10K AIC. ACCESSIBLE ON INSIDE HINGED COVER WITH LABEL DESCRIBING FUNCTION.
6. UTILITY COMPANY ELECTRIC METER. MOUNT SOCKET INSIDE ENCLOSURE WITH METER VISIBLE ON OUTSIDE. COORDINATE REQUIREMENTS WITH UTILITY COMPANY. METER MOUNTING HEIGHT SHALL BE BETWEEN 48" AND 60" ABOVE FINISH GRADE TO CENTER OF METER.
7. PANEL, 120/240VOLT 1 PHASE 3 WIRE, CIRCUIT BREAKER LOAD CENTER TYPE. REFER TO PANELBOARD SCHEDULE FOR CIRCUIT BREAKERS. BREAKERS SHALL BE ACCESSIBLE ON INSIDE HINGED COVER. PROVIDE DIRECTORY OR LABELS.
8. CONTRACTOR SHALL FURNISH AND INSTALL ONE (1) 3"c. 36" DEEP. ALABAMA POWER COMPANY WILL FURNISH AND INSTALL CONDUCTORS. COORDINATE CONNECTION REQUIREMENTS.
9. ALL ENCLOSURE COMPONENTS AND INTERNAL WIRING BETWEEN COMPONENTS SHALL BE DONE BY ENCLOSURE MANUFACTURER.
10. THIS IS A STANDARD ELECTRICAL ENCLOSURE FOR CITY OF AUBURN AND MAY INCLUDE EQUIPMENT NOT USED ON THIS PROJECT.
11. SERVICE TERMINATION LUGS.

GENERAL NOTES

12. ALL ELECTRICAL WORK AND MATERIAL SHALL CONFORM TO THE LATEST EDITION OF THE N.E.C. AND THE REQUIREMENTS OF THE STATE AND LOCAL AUTHORITY HAVING JURISDICTION.
13. WIRING SYSTEM SHALL CONSIST OF COPPER WIRING INSTALLED IN CONDUIT, MINIMUM WIRE SIZE SHALL BE #12 AWG. MINIMUM CONDUIT SIZE SHALL BE 3/4".
14. ALL CONDUCTORS SHALL BE TYPE THHN.
15. CONDUIT SHALL BE SIZED IN ACCORDANCE WITH TABLE 1, CHAPTER 9 OF N.EC.
16. CONTRACTOR SHALL PROVIDE ALL MATERIAL NECESSARY TO FINALIZE A NEAT, COMPLETE AND PROPERLY WORKING ELECTRICAL SYSTEM WHICH CONFORMS TO ALL LOCAL CODES AND THE NATIONAL ELECTRICAL CODE AS PER PLANS, AND SPECS.
17. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VISIT THE SITE AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING CONDITIONS PRIOR TO BID DATE OR CONSTRUCTION DATE, AS HE SHALL BE RESPONSIBLE FOR SAME.
18. EXACT LOCATION OF EXISTING UNDERGROUND UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
19. CUTTING OF EXISTING PAVEMENT IS NOT ALLOWED FOR ROUTING OF NEW CIRCUITS/CONDUITS. PROVIDE DIRECTIONAL HORIZONTAL BORING MINIMUM 36" BELOW GRADE AS REQUIRED.
20. FLAG HOLDER SHALL BE INSTALLED 8'-0" ABOVE GRADE IF REQUIRED.
21. REQUIRED CHAMFER SHALL BE CONSTRUCTED USING CHAMFER STRIP. IT MAY NOT BE HAND TOOLED.
22. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF PEDESTRIAN LIGHTS WITH OWNER REPRESENTATIVE PRIOR TO INSTALLATION.
23. CONTRACTOR SHALL SCHEDULE ALL INSPECTIONS WITH OWNER REPRESENTATIVES AS REQUIRED IN THE CITY OF AUBURN ENGINEERING DESIGN AND CONSTRUCTION MANUAL.
24. SERVICE VOLTAGE AT EACH ELECTRICAL ENCLOSURE SHALL BE 120 / 240 VOLT, 1 PHASE, 3 WIRE. SERVICE SHALL BE UNDERGROUND BY ALABAMA POWER.
25. ENCLOSURE LOCATIONS ARE GENERAL. COORDINATE EXACT LOCATIONS WITH OWNER REPRESENTATIVE AND ALABAMA POWER COMPANY PRIOR TO INSTALLATION.
26. EACH ENCLOSURE SHALL HAVE (1) SPARE 2-INCH CONDUIT STUBBED OUT 5' AND CAPPED. COORDINATE EXACT LOCATION WITH THE CITY OF AUBURN.

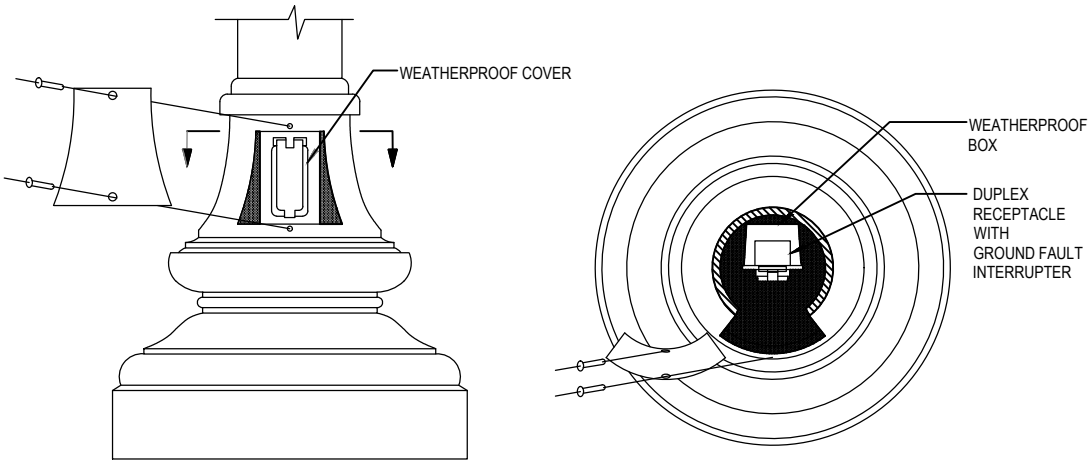
WEATHERPROOF RECEPTACLE - EXTERNAL POST SHAFT LOCATION



SPECIFICATIONS

A 20 AMP, 125 VOLT, GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE SHALL BE MOUNTED IN THE POST. THE RECEPTACLE SHALL BE UL LISTED ACCORDING TO E-48380 AND UL 943 CLASS A AND UL 498. THE RECEPTACLE SHALL HAVE A CAST ALUMINUM, LOCKABLE, UL LISTED COVER THAT IS SUITABLE FOR WET LOCATIONS WHILE IN USE AND COMPLIES WITH NEC ARTICLE 410-57(B). THE COVER SHALL ACCEPT MOST COMMON CORD SETS UP TO 3/8" DIAMETER (14/3). THE RECEPTACLE AND COVER SHALL MOUNT TO AN OUTLET OPENING, IN THE POST SHAFT, WITH A GASKET AND STAINLESS STEEL SCREWS. HOLOPHANE FGIUS-SBKH. LOCATE THIS RECEPTACLE 11' ABOVE BOTTOM OF POLE. THIS RECEPTACLE SHALL BE MOUNTED 11'-0" ABOVE BOTTOM OF POLE BASE.

WEATHERPROOF RECEPTACLE - INTERNAL BASE LOCATION



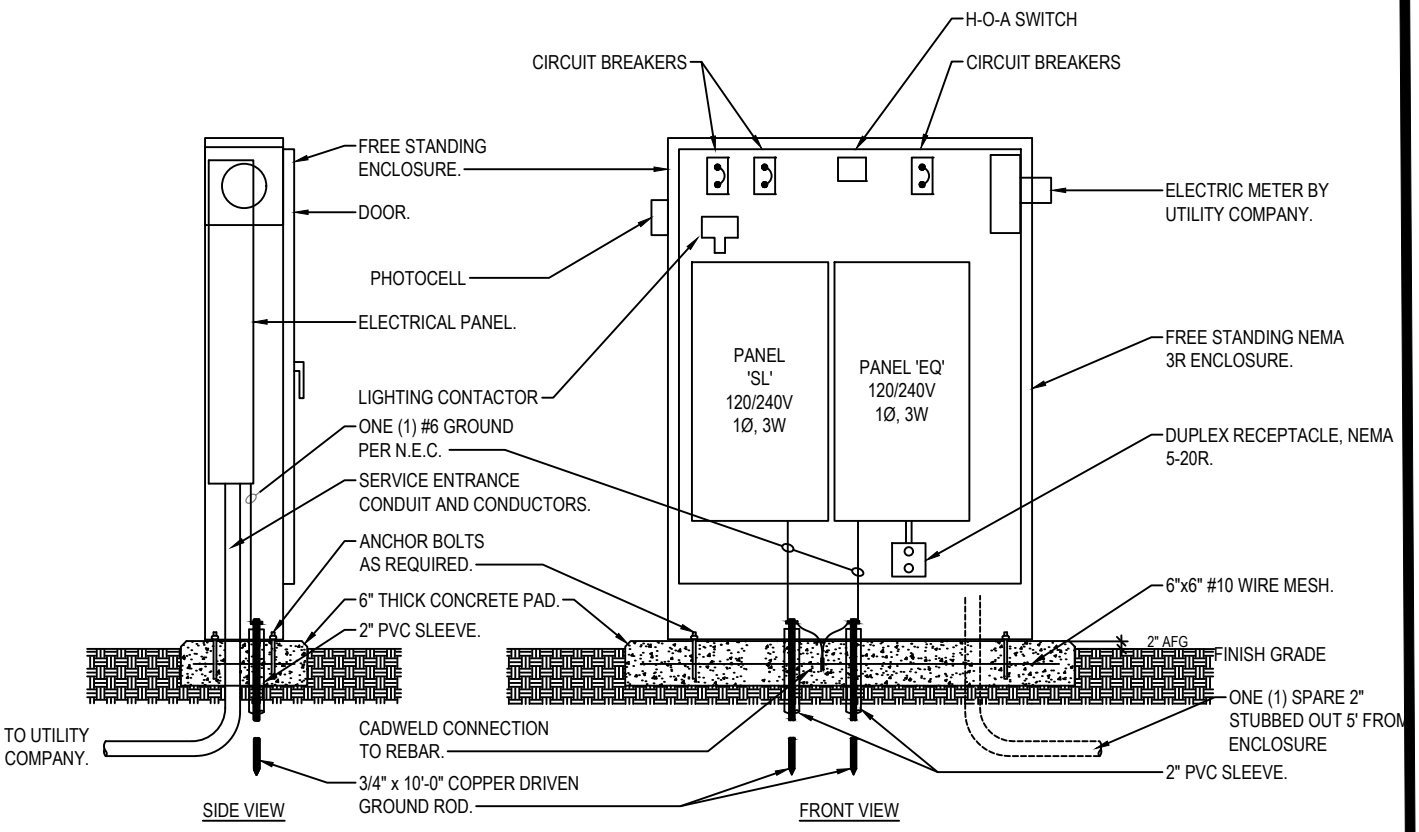
SPECIFICATIONS

A 20 AMP, 125 VOLT, GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE SHALL BE MOUNTED INSIDE THE POST BASE, FACING TOWARD THE ACCESS DOOR. THE RECEPTACLE SHALL BE UL LISTED ACCORDING TO E-48380 AND UL 943 CLASS A AND UL 498. THE RECEPTACLE SHALL BE MOUNTED IN A CAST ALUMINUM BOX AND COVER THAT IS SUITABLE FOR WET LOCATIONS WHILE NOT IN USE. THE RECEPTACLE AND COVER SHALL MOUNT TO A OUTLET BOX WITH A GASKET AND STAINLESS STEEL SCREWS. HOLOPHANE RB/GFI/WPC

NOTES:

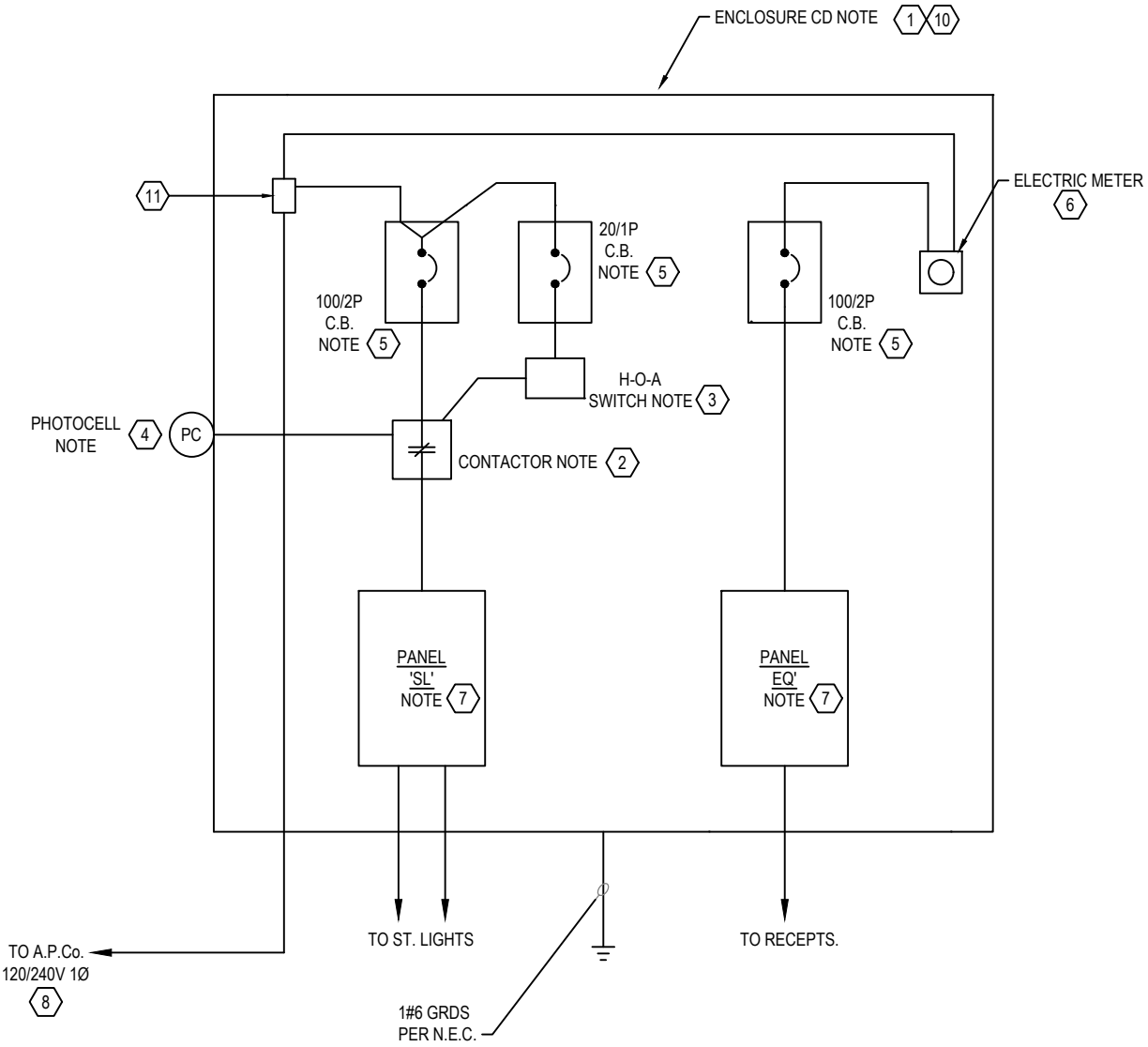
1. RECEPTACLES MUST BE WIRED ON SEPARATE CIRCUIT FROM LIGHT.
2. RECEPTACLES ARE TYPICALLY INSTALLED FOR USE BY AUTHORIZED PERSONNEL FOR SPECIAL EVENTS, DECORATIVE SEASONAL LIGHTING, AND OWNER MAINTENANCE PURPOSES.

PANEL ENCLOSURE DETAIL - TYPICAL



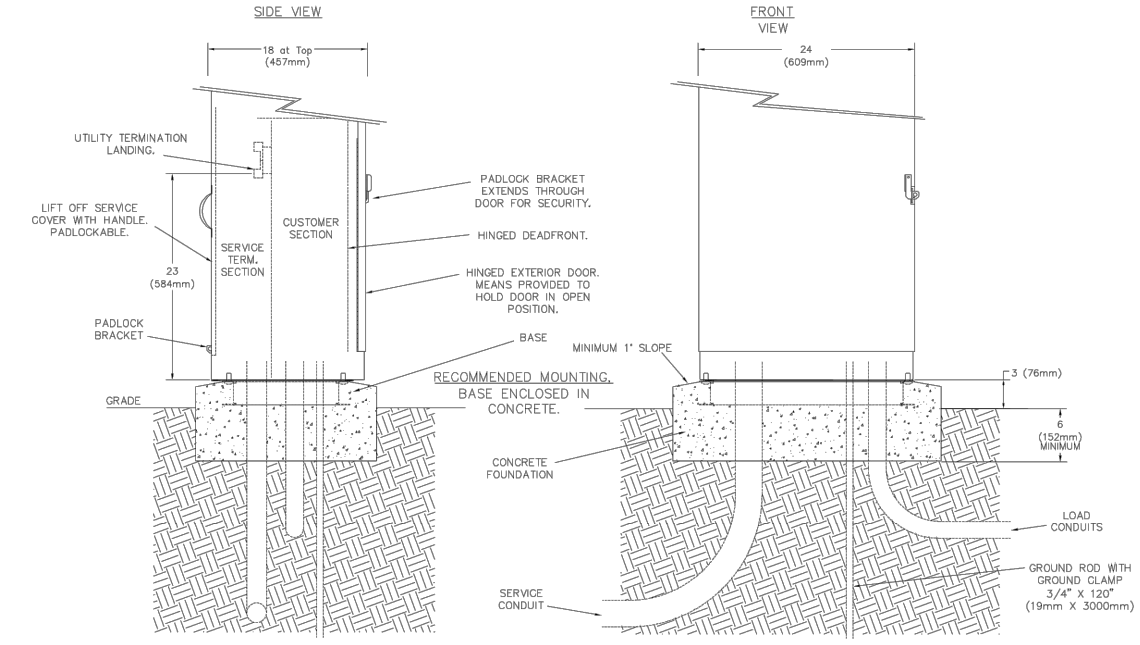
STANDARD DETAILS: TRAFFIC	2.12
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
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IMPLEMENTED: 01-01-2022	

EQUIPMENT INSIDE ENCLOSURE - TYPICAL

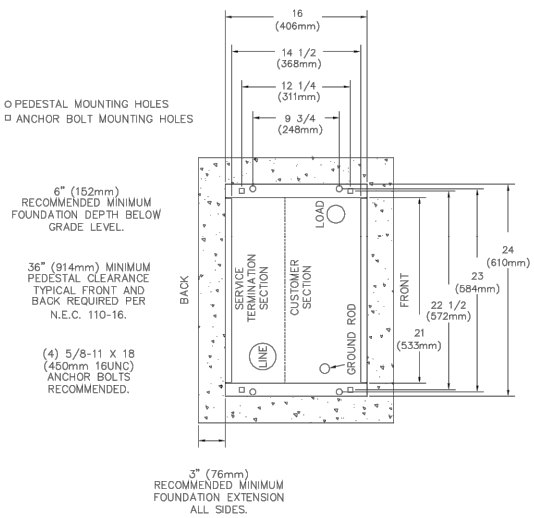


STANDARD DETAILS: TRAFFIC	2.13
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
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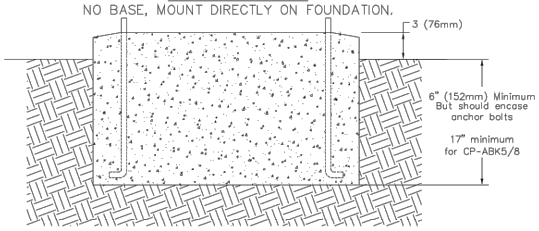
TYPICAL "B" AND "M" SIZE
CONSTRUCTION & INSTALLATION



MOUNTING BASE DETAIL
(TOP VIEW)



OPTIONAL MOUNTING
NO BASE, MOUNT DIRECTLY ON FOUNDATION.

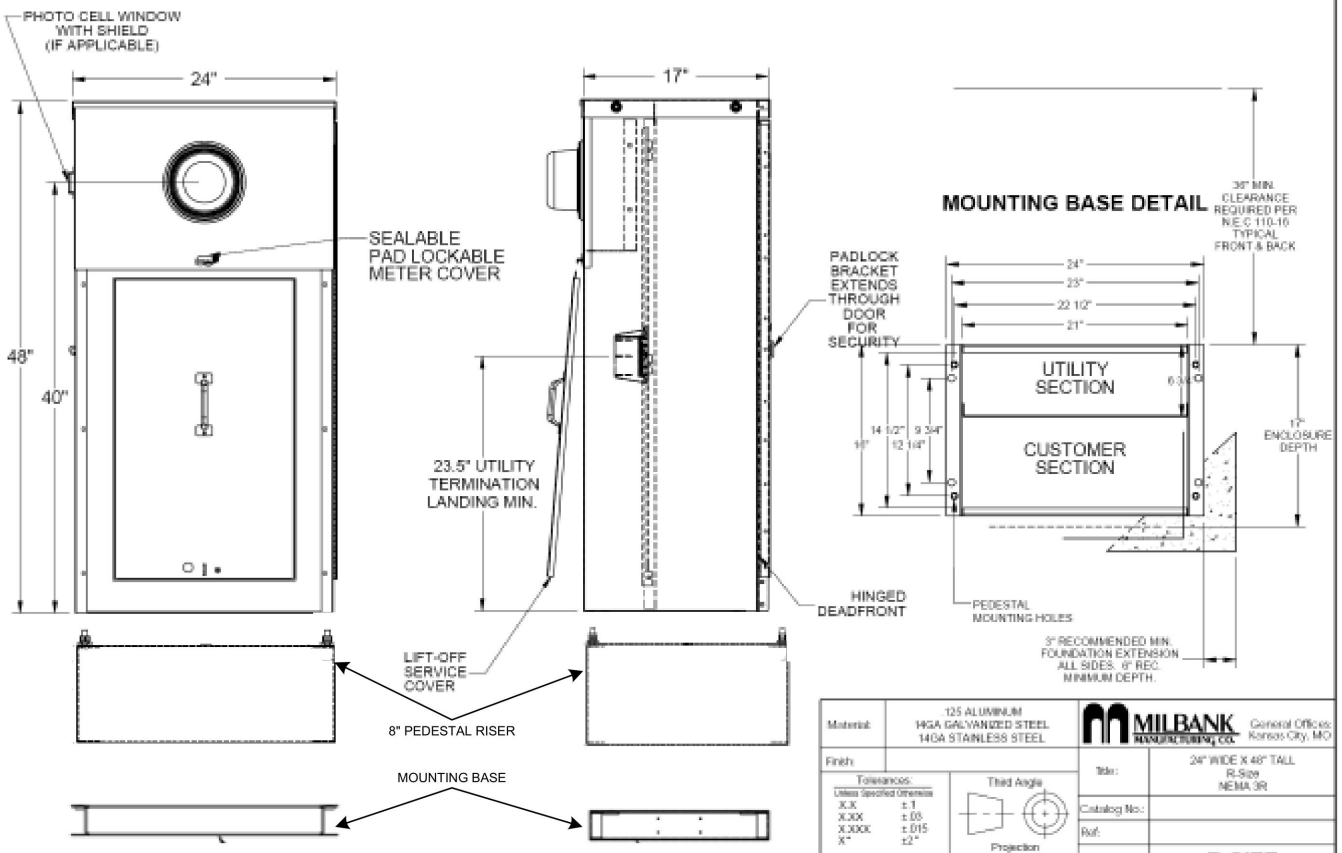


STANDARD DETAILS: TRAFFIC	2.14
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
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City of Auburn

R-Size Outline EXP MTR

24" COMMERCIAL PEDESTAL



Material:	12S ALUMINUM 14GA GALVANIZED STEEL 14GA STAINLESS STEEL	MILBANK MANUFACTURING CO.	General Offices: Kansas City, MO					
Finish:				Title:	24" WIDE X 48" TALL R-Size NEMA 3R			
Tolerances: Unless Specified Otherwise X.X ± .1 X.XX ± .03 X.XXX ± .015 X° ±2°	Third Angle Projection			Catalog No.:				
				Ref:				
Scale: NTS	Checked By:			Drawing No.:	R-SIZE			
Drawn By:	Approved By:			Date: 5-3-07	Sheet: 1 of 2			

**	02-19-09	PROTO TYPE	TB	
A	03-07-11	REMOVE ANCHOR BOLT WORDING ECR00001694	TB	

STANDARD DETAILS: TRAFFIC	2.15
City of Auburn	

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

Catalog Number:

CP3B5212BRBKSL1

TYPE A

120/240 VAC, 1-phase, 3-wire; 200 Amps Maximum, (see Main circuit breaker rating)
Rainproof - Type 3R, Galvanized (G90) steel Enclosure, painted BLACK (RAL 9017)
Enclosed Industrial Control - Suitable ONLY for Use as Service Equipment
The short circuit current rating is 10,000 RMS symmetrical amperes maximum at 240volts maximum, in accordance with the table below, but is limited to the lowest short circuit rating of any installed circuit breaker. Watthour meter is not included in the short circuit rating. Replacement circuit breakers must be of the same type and rating.

METERED CIRCUIT DIRECTORY (PANEL EQ)

No.	Amp.	Poles	Circuit Description	No.	Amp.	Poles	Circuit Description
1	20	1	RECEPTS	2	20	1	RECEPTS
3	20	1	RECEPTS	4	20	1	RECEPTS
5	20	1	RECEPTS	6	20	1	RECEPTS
7	20	1	RECEPTS	8	20	1	RECEPTS
9	20	1	RECEPTS	10	20	1	RECEPTS
11	20	1	RECEPTS	12	20	1	RECEPTS
13				14			
15				16			
17				18			
19				20			
21				22			
23				24			

AIC RATING	MAIN (METERED)	BRANCHES (METERED)
10	Siemens type BQ	Siemens type BQ, QP

UNMETERED CIRCUIT DIRECTORY (PANEL SL)

No.	Amp.	Poles	Circuit Description	No.	Amp.	Poles	Circuit Description
1	20	1	STREET LTS	2	20	1	STREET LTS
3	20	1	STREET LTS	4	20	1	STREET LTS
5	20	1	STREET LTS	6	20	1	STREET LTS
7	20	1	STREET LTS	8	20	1	STREET LTS
9	20	1	STREET LTS	10	20	1	STREET LTS
11	20	1	STREET LTS	12	20	1	STREET LTS
13				14			
15				16			
17				18			
19				20			
21				22			
23				24			

AIC RATING	MAIN (UNMETERED)	BRANCHES (UNMETERED)
22	Siemens type BQ	Siemens type BQ, QP

Circuit breaker handle trip position is between “ON” and “OFF”. To reset breaker, move handle to the full “OFF” position, then to full “ON”.

Terminal Information, Use AL/CU conductors

FIELD WIRED CONNECTORS					BUS CONNECTIONS			For Equipment Ground ONLY, multiple conductors in a single opening are permissable as indicated below		
		SLOTTED HEAD SCREWS			THREADFORMING SCREWS					
Socket Size	Torque Lb.-In.	AWG Wire Size	Torque, Lb.-In. Small Hole	Large Hole	SCREW	MAT'L	Torque, Lb.-In.	AWG Wire Size	Small Hole	Large Hole
5/16"	275	#14-10	20	35	10-24	AL	30	#14-10	1-2	1-2
3/8"	375	#8	25	40	10-24	CU	50	#10	1	3
1/2"	500	#6	35	45	¼-20	AL	50	#8 - 6	1	1
9/16"	600	#4	-	45	¼-20	CU	72	#4 - 1/0		1
		#3-1/0	-	50						

Shipping may loosen electrical connections. CHECK TIGHTNESS BEFORE ENERGIZING.

BONDED NEUTRAL – Remove neutral load conductors for test purposes only! FIELD INSTALLED conductors shall be 60°C, 75°C, or 90°C, sized to 60°C rating for 110 amps or less; and 75°C or 90°C for 125 amps and above.

MADE IN U.S.A.

MILBANK ENERGY AT WORK

STANDARD DETAILS: TRAFFIC 2.16

City of Auburn

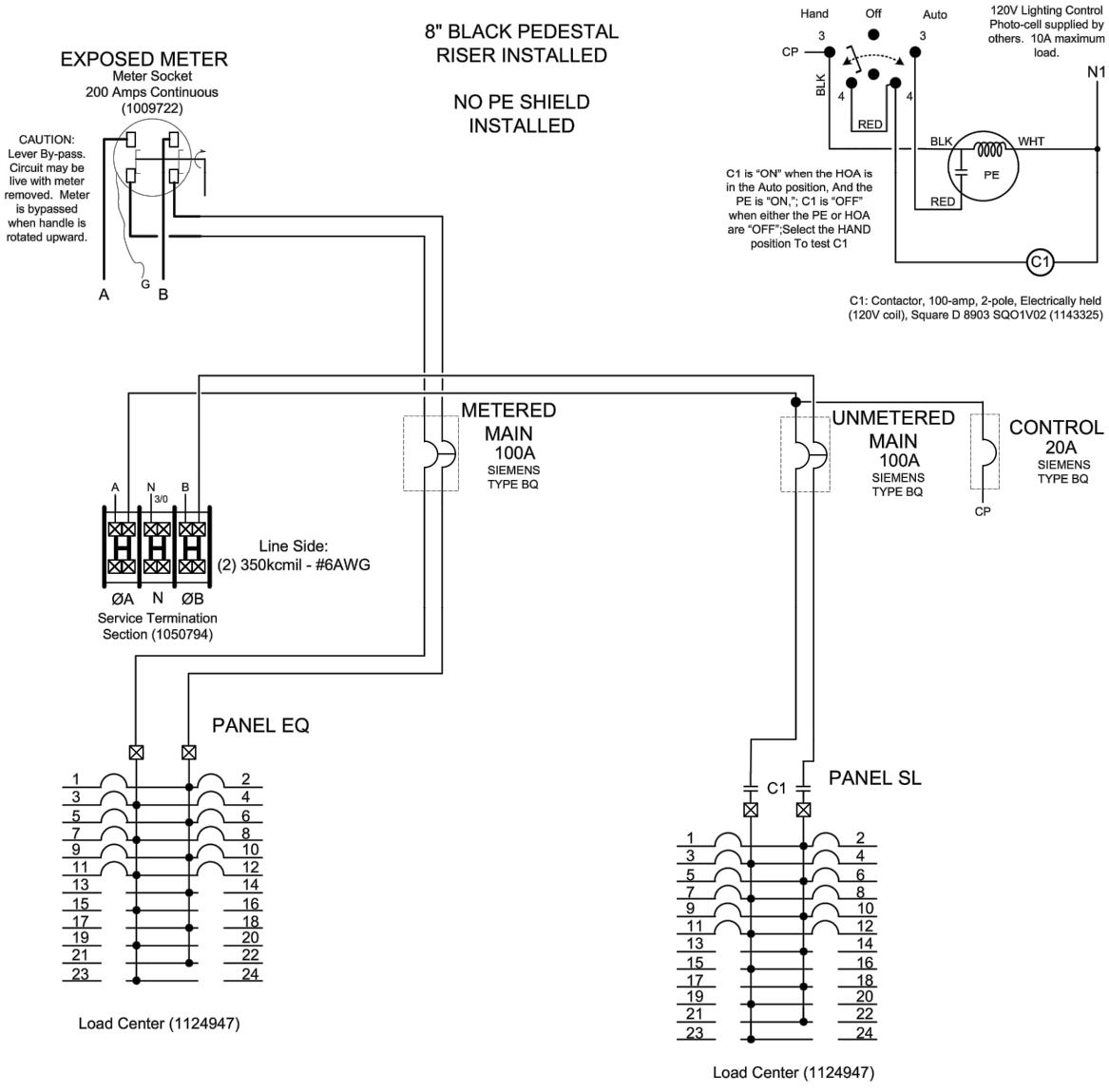
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

Catalog Number:

CP3B5212BRBKSL1

TYPE A

120/240 VAC, 1-phase, 3-wire; 200 Amps Maximum, (see Main circuit breaker rating)
Rainproof - Type 3R, 304 Galvanized (G90) steel Enclosure, painted BLACK (RAL 9017)
Enclosed Industrial Control - Suitable ONLY for Use as Service Equipment



MADE IN U.S.A.

MILBANK
ENERGY AT WORK

STANDARD DETAILS: TRAFFIC 2.17

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

SP Series Specifications

ELECTRICAL

Input

Voltage	120 VAC +12%, -29% (without battery discharge)
Frequency	48 to 62 Hz

Output

Voltage	120 VAC +3%
Frequency	50 or 60 Hz
Rating:	SP 1000 SR/SN 1,250 VA/875 Watts SP 1250 SR/SN PLUS 1,250 VA/875 Watts[1] SP 2000SR/SN/U 2,000 VA/1400 Watts
Crest Factor Ratio (Non-linear Load and < 5% THD) Typical	@50% Load Up to 4.8:1 @75% Load Up to 3.2:1 @100% Load Up to 2.4:1
Total Harmonic Distortion (THD)	4.0% Max.
Dynamic Response	±4% for 100% Step Load Change 0.5 ms Recovery Time
Overload	110% for 10 sec; 200% for .05 sec
UPS Protection	Input and Output Short Circuit; Input and Output Overload; Excessive Battery Discharge

ENVIRONMENTAL

Operating Temp.	-40°C to +74°C (-40F to+165°F)
Humidity	0% to 95% Non-condensing
Altitude	Sea Level to 10,000 ft (some derating of temp. w/altitude > 6,000 ft)

MECHANICAL

Input	Hardwired to PIM
Outputs	Hardwired to PIM, w/single 15 Amp Receptacle on back of UPS
Cabinet	NEMA, 332 or CBO-123 Cabinet Style Configurations Available; NEMA 3R Type II and Type III Optional

CUSTOM Options

Consult Factory for other Custom options

DESIGN

Standard Features	Power Factor Corrected Input; Fully Regenerative; True On-Line Continuous Power; Low Distortion Sinewave Output; Designed for Non-linear Loads; Extended Brownout Protection; EIA/RS232 Data Interface
Specifications	Meets FCC Class A, IEEE 587/ANSI C62.41, IEC 555 @ 120 VAC and NEMA Stds
MTBF	Inverter: > 100,000 hrs System w/Bypass: 150,000 hrs Calculated from Component Spec
Typical Recharge Time to 85% Capacity @ 100% Load	48-72 hrs (more time required with extended battery option) Less than 20 hrs with optional Fast Battery Charger

CONTROLS AND INDICATORS

Ramping LEDs Single LEDs	Battery Level; Load Level AC In; Inverter On; Low Battery and Summary Alarm; Alarm Silence
Control Panel	Power On; Cold Start; Test; Alarm Silence; Event Counter (w/Reset); Hour Meter; Battery Disconnect
Audible Alarms	Utility Interrupt; Inverter Failure; Overload; Low Battery; Self Test
Serial Interface for EIA 232. Optional NTCIP and TCP/IP via Standard RJ45 Connector	Full Interactive Remote Computer Monitoring and Control of Most Features Including Load Control (requires optional monitoring software); NTCIP and TCP/IP Ready
Contact Closures ("D" connector)	Open Collector for Remote Annunciation of Power Up, Power Down, On Battery, Low Battery and Alarms

Specifications subject to change without prior notice.



Uninterruptible Power for Traffic Signal Applications - 1000, 1250 and 2000VA

Model	VA	Watts	Input Current (A)	Output Current (A)	Backup Time 100% / 50% Load	Unit Weight (lbs)	Rackmount H x W x D (in)
SP1000SN/SR[2]	1,250	875	8.8	10.4	1.5 hrs. / 3.25 hrs.	20	3.50 x 19.0 x 13.0 (2U)
SP1250SN/SR Plus[1,2]	1,250	875	8.8	10.4	1.5 hrs. / 3.25 hrs.	20	3.50 x 19.0 x 13.0 (2U)
SP2000SN/SR[2]	2,000	1400	18.0	20.0	15.0 min. / 35.0 min.	30	5.25 x 19.0 x 17.0 (3U)
SP1250U	1,250	875	8.8	10.4	1.5 hrs. / 3.25 hrs.	20	3.50 x 19.0 x 13.0 (2U)
SP2000U	2,000	1400	18.0	20.0	15.0 min / 35.0 min	30	5.25 x 19.0 x 17.0 (3U)

Note 1 Supports 1400 watt peak load for 10 seconds or less, intended for yellow incandescent applications.
Note 2 Requires Clary PIM30C, G, R, or GR for traffic applications.

CLARY®
The Continuous Power Company™

Clary Corporation
150 E Huntington Drive Monrovia, Ca 91016
Tel: 800.442.5279 • Fax:626.305.0254
• www.clary.com

Made in the USA

P/N 520-13481
08/04/06-Ver. 1.4

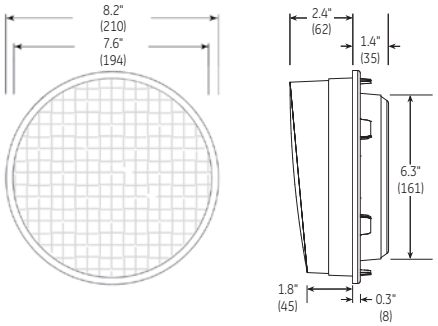
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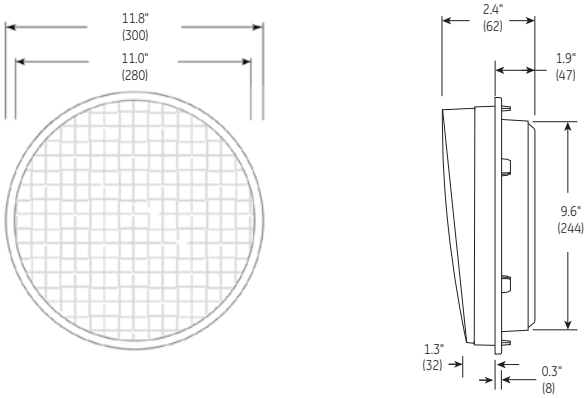
RX11 LED Signal Modules

- 8 and 12 inch

Mechanical Outline

Dimensions in inches. (mm) indicates metric equivalent





Design Compliance

Test Type	Compliance
Luminous Intensity	ITE VTCSH-STD Part 2 - July 1998
Chromaticity	ITE VTCSH-STD Part 2 - July 1998
Moisture Resistance	NEMA STD 250 Type 4 - 1991
Mechanical Vibration	MIL-STD-883 Method 2007
Electronic Noise	FCC Title 47 Sub. B Sec 15[1]
Transient Voltage Protection	ITE VTCSH-STD Part 2 - July 1998
Controller Compatibility	NEMA TS-2-1992
Wiring	National Electric Code

[1] Class A

Operating Specifications

Parameter	Rating
Operating Temperature Range	-40 to + 74°C (-40 to +165°F)
Operating Voltage Range	80 to 135 V (60Hz AC)
Power Factor (PF)	> 90 %
Total Harmonic Distortion (THD)	< 20 %
Voltage Turn-off (VTO)	45 V
Lens & Shell Material	UV Stabilized Polycarbonate
Wiring	16 AWG, Color Coded with Strain Relief

Product Information

Model Number	Size (in)	AC Voltage	Power (W)	Wavelength (nm)	Maintained Intensity (Cd)
		Nominal	Nominal	Dominant	Minimum[2]
DR4-RTFB-20A	8	120V – 60 Hz	5	626	133
DR4-YTFB-20A	8	120V – 60 Hz	13	589	267[3]
DR4-GTFB-20A	8	120V – 60 Hz	6	508	267
DR4-GCFB-20A	8	120V – 60 Hz	6	508	267
DR6-RTFB-20A[4]	12	120V – 60 Hz	10	626	339
DR6-YTFB-20A	12	120V – 60 Hz	22	589	678[3]
DR6-GTFB-20A	12	120V – 60 Hz	12	508	678
DR6-GCFB-20A	12	120V – 60 Hz	12	508	678

Options :
- Q : Quick Connect
- S : Medium Base Socket
- F : In-line Fuse

Standard product equipped with spade connectors.
[2] Measured at +2.5°H -2.5°V, T_o = 25°C.
[3] Actual intensity less than ITE VTCSH-STD Part 2 - July 1998.
[4] May exceed maximum intensity of ITE VTCSH-STD Part 2 - July 1998.

Distributed by:

6180 Halle Drive • Valley View, Ohio 44125-4635, • USA
P: 216.606.6555 • F: 216.606.6599 • www.led.com • signals@led.com

For customer service & technical support, contact:
1-888-MY-GE-LED (1.888.694.3533)

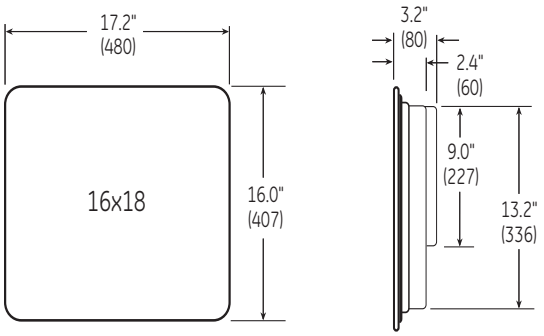
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LED Array Pedestrian Countdown Signals

- 16 X 18 inch module

Mechanical Outline

Dimensions in inches. (mm) indicates metric equivalent



Design Compliance

Test type	Compliance
Luminous intensity	ITE Pedestrian Traffic Control Signal Indication - Part 2: Light Emitting Diode (LED) Pedestrian Traffic Signal Modules Section 4.1.1 (applies to: Hand & Person only)
Chromaticity	ITE PTCSI-STD - Part 2
Moisture Resistance	NEMA STD 250 Type 4 – 1991
Mechanical Vibration	MIL-STD-883 Method 2007
Electronic Noise	FCC Title 47 Sec 15 Sub. B[1]
Transient Voltage Protection	ITE PTCSI-STD - Part 2
Controller Compatibility	NEMA TS-2-1992
Wiring	National Electric Code

[1] Class A

Operating Specifications

Parameter	Rating
Operating Temperature Range	-40 to +74°C (-40 to +165°F)
Operating Voltage Range	80 to 135 V (60Hz AC)
Power Factor (PF)	> 90 %
Total Harmonic Distortion (THD)	< 20 %
Voltage Turn-Off (VTO)	45 V
Lens & Shell Material	UV Stabilized Polycarbonate
Wiring	16 AWG, Color Coded with Strain Relief
LED Color	Hand: Portland Orange Person: Lunar White Countdown: Portland Orange

Product Information

Model Number	Operating Cycle	Configuration	Symbol			AC Voltage	Power (W)			Figure
			Hand	Person	Countdown	Nominal	Hand	Person	Countdown	
PS7-CFF1-01A-18[2]	Clearance	Overlay/ Countdown	Full	Full	2 Rows/ 9" high	120V – 60Hz	9	8	5	A
PS7-CFL1-01A	Overlay	Overlay	Full	Full	–	120V – 60Hz	9	8	–	B

[2] Full MUTCD Compliance
Standard product shipped with spade connectors.
Test Conditions: T_a = 25°C
Options: Q – Quick Connect, MB – For GTE Winkomatic (16 7/8" x 16 1/4") Housing, MC – For Econolite (18" x 15 5/8") Housing.

Figure A



Figure B



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APPENDIX J. Examples of Traffic Calming Measures

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APPENDIX J. Examples of Traffic Calming Measures:

Traffic calming involves two (2) types of devices to influence vehicle operation and driver behavior: 1) Vertical devices, such as speed humps or speed cushions; and 2) Horizontal devices, or street narrowing, such as chicanes, pinch points, traffic circles, and median islands.

J-1 Speed Humps / Speed Tables

Speed humps/cushions are rounded raised areas placed across the roadway. They are generally ten (10) to fourteen (14) feet long, and are three (3) to four (4) inches high. The profile of a speed hump can be circular, parabolic, or sinusoidal. They are often tapered as they reach the curb on each end to allow unimpeded drainage. Speed humps may increase noise due to braking, acceleration and vertical displacement of vehicles.

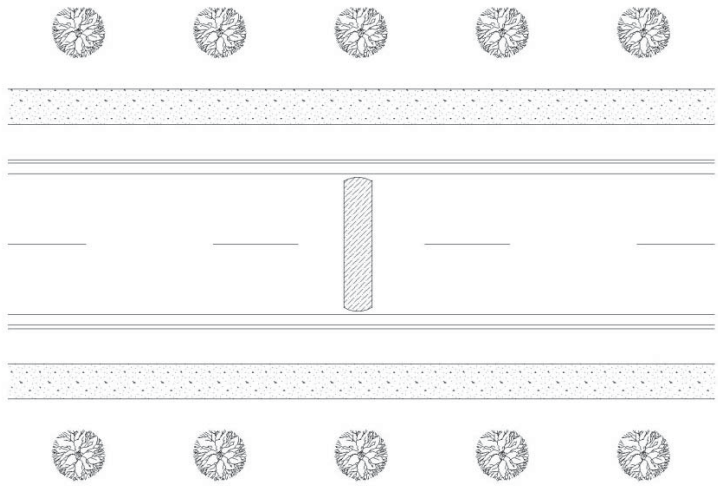


FIGURE 1
Example of a Speed Hump

Speed tables are flat-topped speed humps often constructed with brick or other textured materials on the flat section. Speed tables are typically long enough for the entire wheelbase of a passenger car to rest on the flat section. Their long flat fields give speed tables higher design speeds than Speed Humps. The brick or other textured materials improve the appearance of speed tables, draw attention to them, and may enhance safety and speed-reduction. Speed tables are good for locations where low speeds are desired but a somewhat smooth ride is needed for larger vehicles, or where flat surface is needed to function as a raised crosswalk.

J-2 Textured Pavements / Surface Roughing

Textured pavements, or surface roughing, are a traffic calming measure consisting of a change in typical roadway surface material with the use of brick, concrete pavers, stamped asphalt/concrete, or rumble strips. This treatment can be used on the entire footprint of an intersection or on individual raised or at-grade crosswalks. A textured treatment has the effect of increasing driver awareness to the idea that vehicles share the

space pedestrians and bicyclists. Textured pavements are also associated with reduced travel speeds. This type of traffic calming measure is useful in areas where the loss of on-street parking would be unacceptable.

J-3 Pinch Points

Pinch points are curb extensions at intersections or in mid-block areas that reduce the roadway width from curb to curb. They create a pedestrian-friendly environment by shortening crossing distances for pedestrians. When applied at intersections, they also tighten the curb radii at the corners, reducing the speeds of turning vehicles.

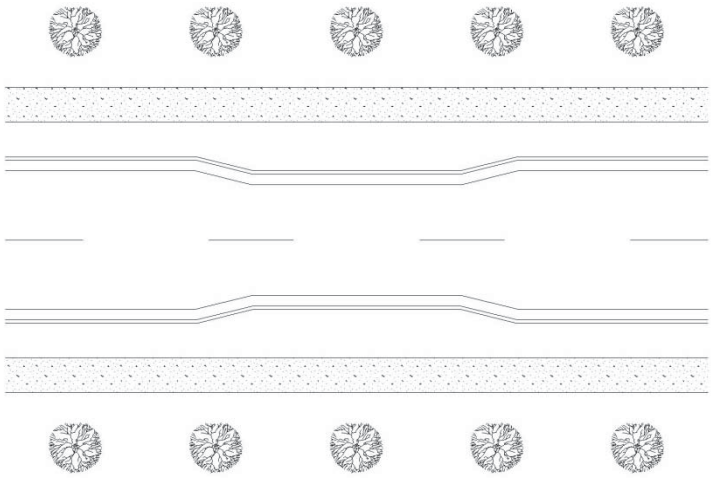


FIGURE 2
Example of a Pinch Point

J-4 Chicanes

Chicanes are mid-block curb extensions that alternate from one side of the street to the other, forming S-shaped curves. Chicanes can also be created by alternating on-street parking, either diagonal or parallel, between one side of the street and the other. Each parking bay can be created either by restriping the roadway or by installing raised, landscaping islands at the ends of each parking bay. This technique is also suitable for use with pairs off-set T-intersections.

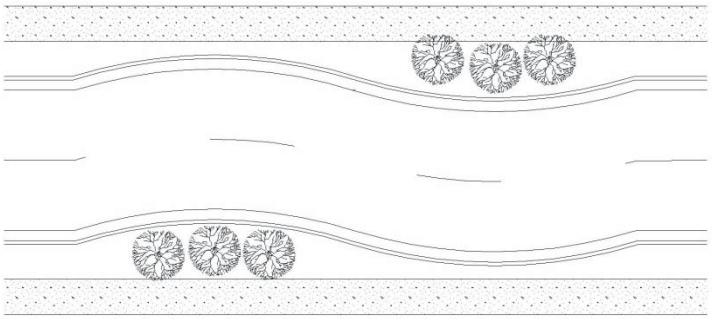


FIGURE 3
Example of a Chicane

J-5 Traffic Circles

Traffic circles are raised islands, placed in intersections, around which traffic circulates. Traffic circles, or mini-roundabouts, reduce the number of conflict points in an intersection and physically reduce speeds.

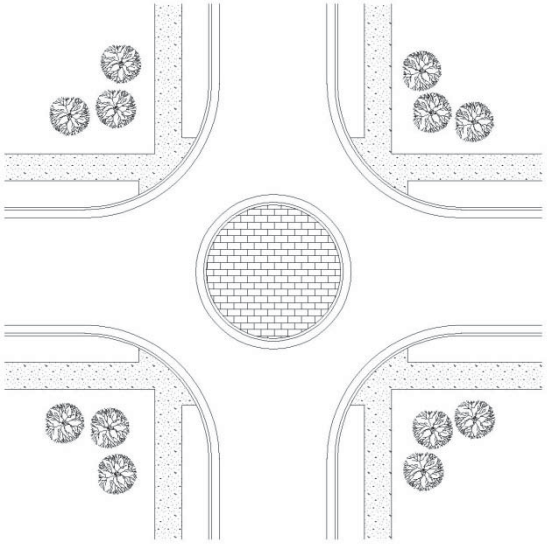


FIGURE 4
Example of a Traffic Circle

J-6 Median Islands

A median island is a raised barrier located along the centerline of a street that narrows the travel lanes at that location. When placed at the entrance to a neighborhood, it can provide positive indication that a driver is entering a residential area. If designed well, median islands can have positive aesthetic value, providing a landscaping opportunity.

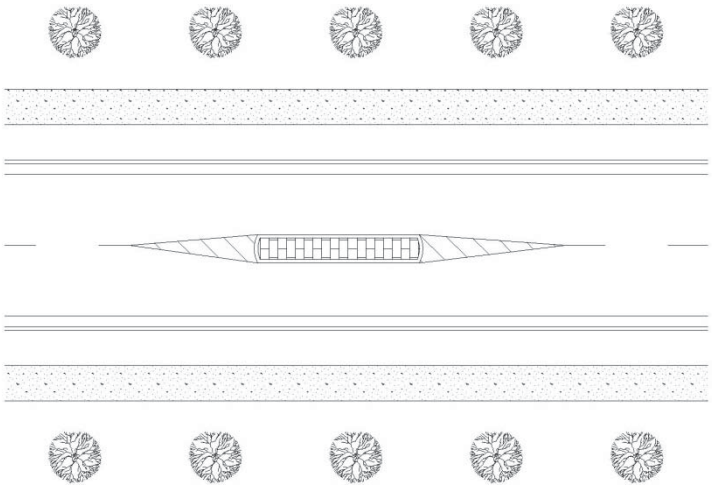


FIGURE 5
Example of a Median Island

J-7 Cut Through Closures

Partial or full road closures are often used to address the issue of cut through traffic. Full street closures can include landscaped islands, walls, gates, or bollards or any other type obstruction constructed in existing roadways to prevent the passage of vehicles. Barriers can also be constructed diagonally across an intersection to divert traffic and prohibit the through movement across the intersection.

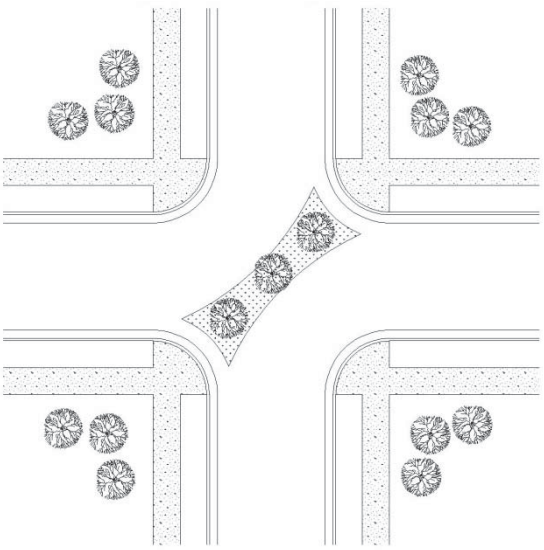


FIGURE 6
Example of a Full Road Closure

Partial or half closures are barriers that restrict traffic to one-way travel for a distance approaching or departing an intersection.

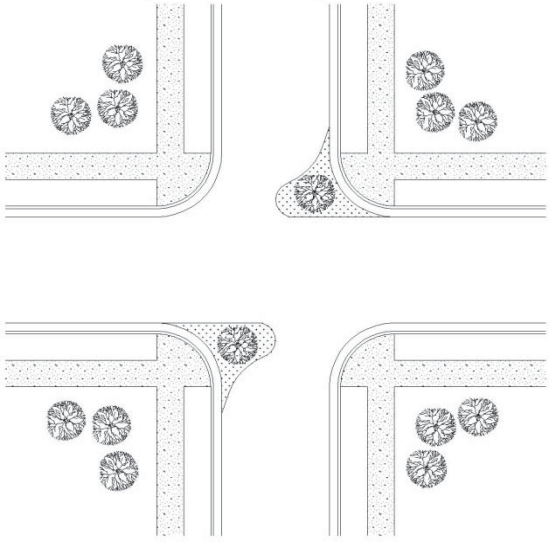


FIGURE 7
Example of a Partial Road Closure

APPENDIX K. Arterial Roads List

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APPENDIX K. Arterial Roads List:

Alabama Street (W. Samford Avenue to Pumphrey Avenue)
Beehive Road (Cox Road to Wire Road)
Bent Creek Road (I-85 to E. Glenn Avenue)
Chadwick Lane
College Street
Cox Road
Dean Road (Moores Mill Road to Opelika Road)
Donahue Drive (W. Farmville Road to E. University Drive)
East University Drive
Farmville Road
Gay Street (Opelika Road to Samford Avenue)
Glenn Avenue (N. Donahue Dr. to City Limits)
Heath Road (AL 147)
Martin Luther King Drive
Moores Mill Road
Opelika Road
Pumphrey Avenue
Richland Road
Samford Avenue
Sandhill Road
Shelton Mill Road
Shug Jordan Parkway (AL 267/147)
Society Hill Road
Wire Road (Heisman Dr. to City Limits)

Highway Roads List:

U.S. Highway 280

Generally, information is updated quarterly

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APPENDIX L. Collector & Residential Collector Road List

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APPENDIX L. Collector Roads List:

Academy Drive (Gatewood Dr. to NW Terminus)
Airport Road
Annalue Drive
Auburn Lakes Road
Beehive Road (Wire Rd. to Martin Luther King Dr.)
Bent Creek Road (Hamilton Road to I-85)
Binford Drive
Bragg Avenue
Bud Black Road
Byrd Street (W. Magnolia Avenue to MLK Drive)
Cary Creek Parkway
Chewacla Drive
Commerce Drive
S. Dean Road (E. University Dr. to Moores Mill Rd.)
N. Dean Road (Opelika Road to Sandstone Lane)
Dekalb Street (Opelika Road to Terminus)
S. Donahue Drive (E. University Dr. to E. Longleaf Dr.)
Drake Avenue (N. Donahue Drive to N. Ross Street)
Gatewood Drive
S. Gay Street (Samford Avenue to E. University Drive)
N. Gay Street (Opelika Road to Shelton Mill Road)
W. Glenn Avenue (N. Donahue Drive to Byrd Street)
Grand National Parkway
Grove Hill Road (Ogletree Road to Terminus)
Hamilton Road (Moores Mill Road to City Limits)
Harper Avenue
Longleaf Drive
Magnolia Avenue
Mill Creek Road
Miracle Road
Mitcham Avenue
Moores Mill Road (Society Hill Rd. to City Limits)
Mrs. James Road
Ogletree Road
Old Cox Road
Pear Tree Road
Rolling Ridge Road
Ross Street
Saugahatchee Road (Annalue Dr. to Airport Rd.)
Shell Toomer Parkway
Society Hill Road (Sandhill Rd. to Terminus)
Southview Drive
Stonewall Road
E. Thach Avenue
Veterans Boulevard
Will Buechner Parkway
Willis Turk Road
Wire Road (W. Magnolia Ave. to Heisman Dr.)
Woodfield Drive (S. College Street to S. Gay Street)
Wrights Mill Road (Samford Ave. to Shell Toomer Pkwy)
Yarbrough Farms Boulevard (Richland Road to Terminus)

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Residential Collector Roads List:

Academy Drive (City Limits to Terminus)
Asheton Lane
Bedell Avenue
Club Creek Drive (Yarbrough Farm to Falls Crest Dr.)
Conservation Drive
Cotswold Way
Crescent Boulevard (Piedmont Dr. to N. Donahue Dr.)
Debardeleben Street (E. Glenn Avenue to E. Thach Avenue)
Deer Run Road
Dekalb Street (E. University Dr. to terminus)
Downs Way
Foster Street
Grove Hill Road (Moores Mill Road to Terminus)
James Burt Parkway
Keystone Drive
Longwood Drive
Lundy Chase Drive
Monticello Drive
Moores Mill Drive
Old Mill Road
Piedmont Drive
Preserve Drive (Conservation Dr. to northern terminus)
Rock Fence Road
Sanders Street
Solamere Lane
Stanton Drive (VFW Road to Grove Hill Road)
Tacoma Drive
Tuscany Hills Drive
VFW Road (Binford Drive to Stanton Drive)
Watercrest Drive
Yarbrough Farms Boulevard

Generally, information is updated quarterly.

Updated: March 1, 2024

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APPENDIX M. Local Commercial/ Local Street/ Cul-de-Sacs/ Alleys List

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APPENDIX M. Local Commercial/ Local Streets/ Cul-De-Sacs/ Alleys List

Local Commercial Roads List:

Bucees Boulevard
Corporate Parkway
Enterprise Drive
Haley Lane
Industry Drive
Innovation Drive
Mall Boulevard
Mall Parkway
McMillan Street
Paul Parks Lane
Riley Street
Samford Trace Court
Samford Village Court
Samglenn Drive
Technology Parkway
West Tech Lane

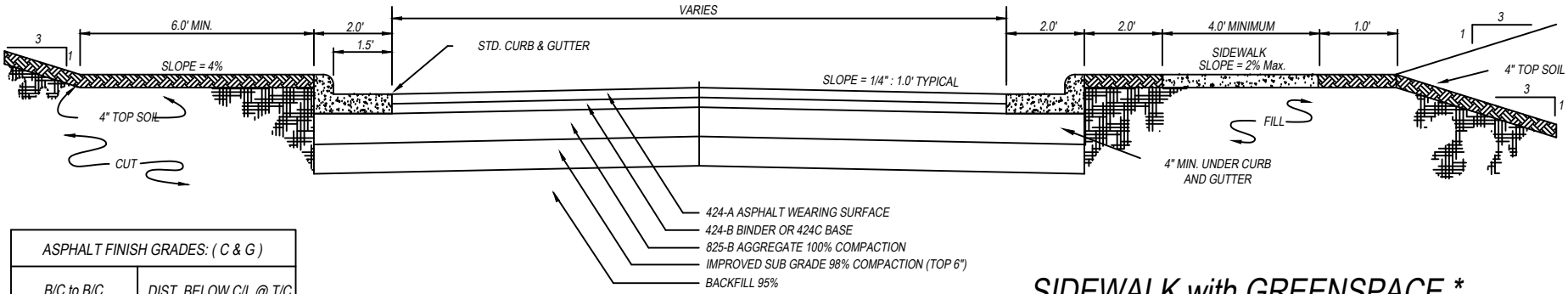
All other City streets, as applicable.

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APPENDIX O. Street Details and Standard Drawings

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TYPICAL STREET CROSS SECTION
WITH CURB/GUTTER AND SIDEWALK

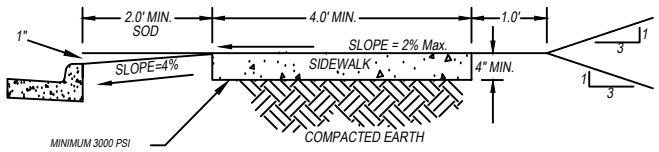


ASPHALT FINISH GRADES: (C & G)	
B/C to B/C	DIST. BELOW C/L @ T/C
26.0'	2.00"
28.0'	1.75"
31.0'	1.38"
35.0'	0.88"
40.0'	0.26"

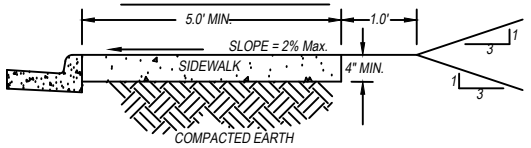
STREET BUILDUP						
	0 TO 2,000 VPD		2,001 TO 5,000 VPD		5,001 AND GREATER	
CLASSIFICATION	ALLEY/CUL-DE-SAC LOCAL RESIDENTIAL		RESIDENTIAL COLLECTOR		COLLECTOR/ARTERIAL LOCAL COMMERCIAL	
	CLASS II		CLASS III		CLASS IV	
	FULL DEPTH	ASPHALT/BASE	FULL DEPTH	ASPHALT/BASE	FULL DEPTH	ASPHALT/BASE
WEARING SURFACE (424A)	1"	1"	2"	1"	2"	1"
BINDER (424B) OR BASE (424C)	* 4"	2"	* 5"	* 4"	* 6"	* 4"
CRUSHED AGGREGATE BASE 825B		6"		6"		* 9"

NOTES: MIXES SHALL COMPLY WITH THE LATEST EDITION OF THE ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
* BINDER OR BASE LAYER TO BE PLACED IN TWO EQUAL LIFTS.

SIDEWALK with GREENSPACE *



5' SIDEWALK



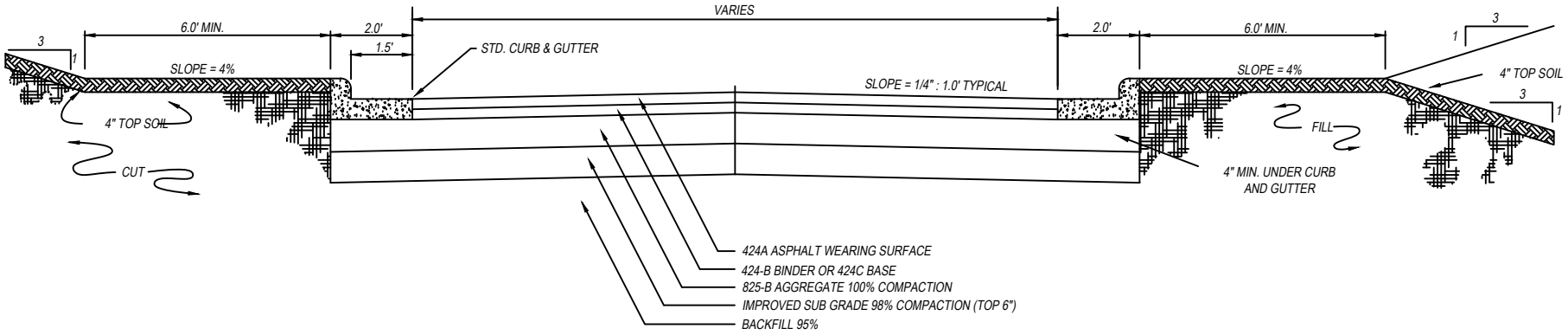
NOTES:
1. PROVIDE 1 1/2" DEEP BY 1/8" WIDE CONTROL JOINTS EVERY 5' WITH EXPANSION JOINTS EVERY 50'. EXPANSION MATERIAL CAN BE FILTER BOARD OR A TREATED 1x4.
2. WHEN THE DISTANCE BETWEEN THE BACK OF CURB AND THE EDGE OF SIDEWALK IS LESS THAN TWO FEET, THE SIDEWALK MUST BE A MINIMUM OF FIVE FEET WIDE.
3. SIDEWALK (ACCESSIBLE ROUTE) WITH CLEAR WIDTH LESS THAN 60 INCHES SHALL PROVIDE PASSING SPACES AT INTERVALS OF 200 FEET MAXIMUM. PASSING SPACES SHALL BE COMPLIANT WITH PROWAG STANDARDS.
4. WHERE SIDEWALK ABUT INLET TOPS, #4 REBAR PLACED 12" O.C. SHALL BE PLACED 6" MIN. INTO INLET TOP AND 12" MIN. INTO SIDEWALK.
* 4 FOOT WIDTH IS ALLOWED ON LOCAL STREETS AND CUL DE SAC'S. 5 FOOT MINIMUM IS REQUIRED ON ALL ARTERIALS, COLLECTORS, LOCAL COMMERCIAL, AND RESIDENTIAL COLLECTORS.

STANDARD DETAILS: STREETS 5.00

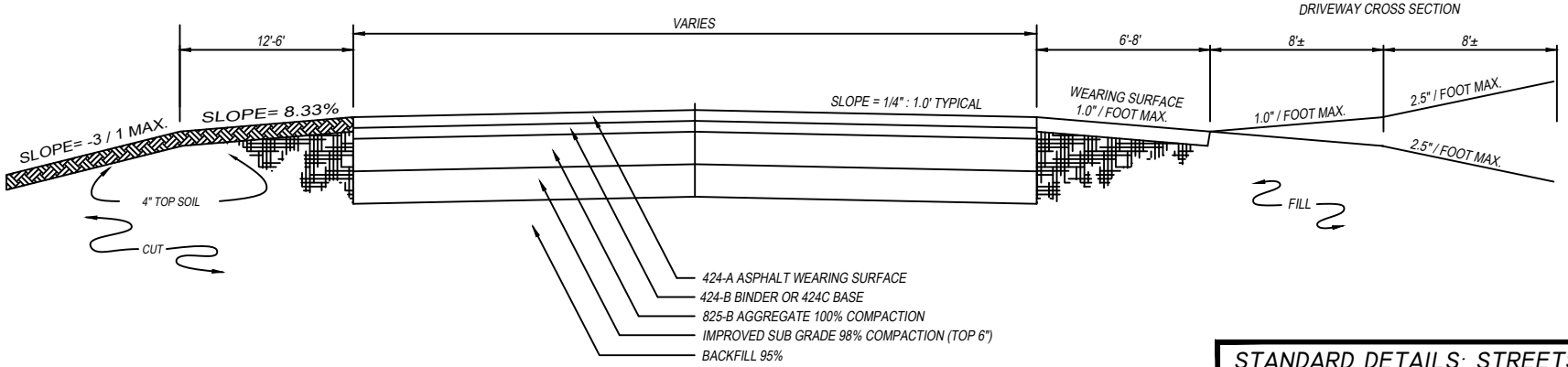
City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

TYPICAL STREET CROSS SECTION WITH CURB AND GUTTER



*TYPICAL STREET CROSS SECTION WITHOUT CURB AND GUTTER

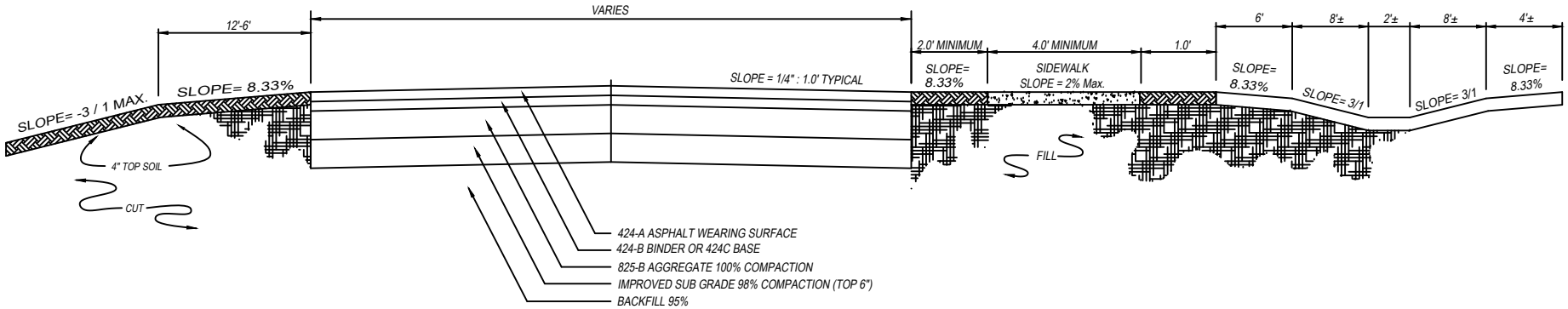


** THIS CROSS SECTION ALLOWED ONLY IF THE SIDEWALK REQUIREMENT IS WAIVED BY THE PLANNING COMMISSION.*

STANDARD DETAILS: STREETS	5.01
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	03-01-2024
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

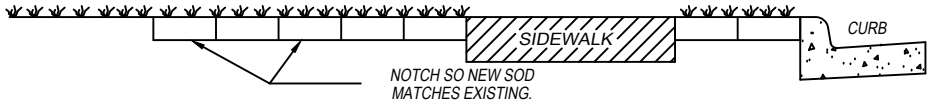
City of Auburn

TYPICAL STREET CROSS SECTION
WITHOUT CURB/GUTTER, AND WITH SIDEWALK



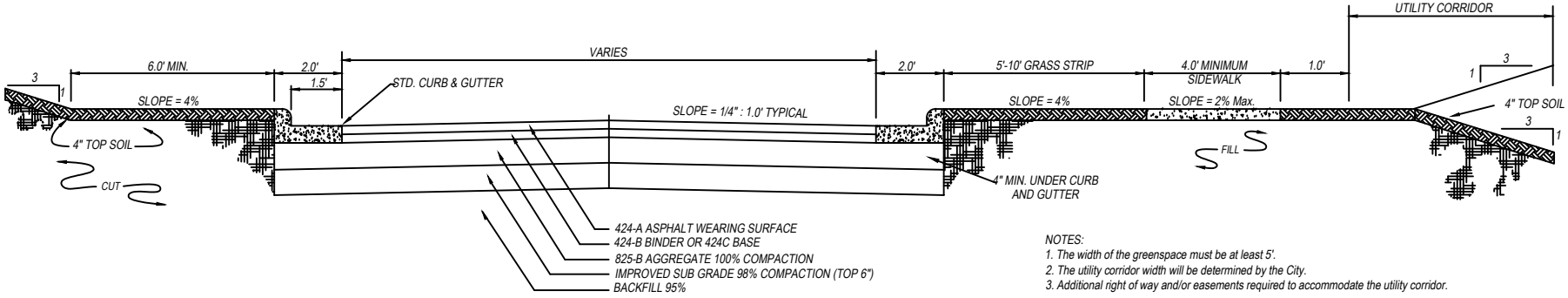
STREET AND SIDEWALK CONFIGURATIONS				
CLASSIFICATION	B/C to B/C WIDTH	PAVEMENT WIDTH	ROW	SIDEWALK LOCATION
ALLEY (ONE-WAY)	NOT REQUIRED	11	25	NOT REQUIRED
ALLEY (TWO-WAY)	NOT REQUIRED	20	30	NOT REQUIRED
CUL-DE-SAC	26	22	50	1 SIDE*
LOCAL RESIDENTIAL	26	22	50	BOTH SIDES
LOCAL RESIDENTIAL	28	24	50	1 SIDE*
LOCAL COMMERCIAL	28	24	50	1 SIDE*
RESIDENTIAL COLLECTOR	31	27	60	BOTH SIDES
COLLECTOR	35	31	60	1 SIDE*
COLLECTOR	31	27	60	BOTH SIDES
COLLECTOR @ INTERSECTIONS	40	36	60	BOTH SIDES
ARTERIAL	52	48	80	BOTH SIDES
* CITY ENGINEER SHALL DETERMINE LOCATION OF SIDEWALK.				

SOD DETAIL



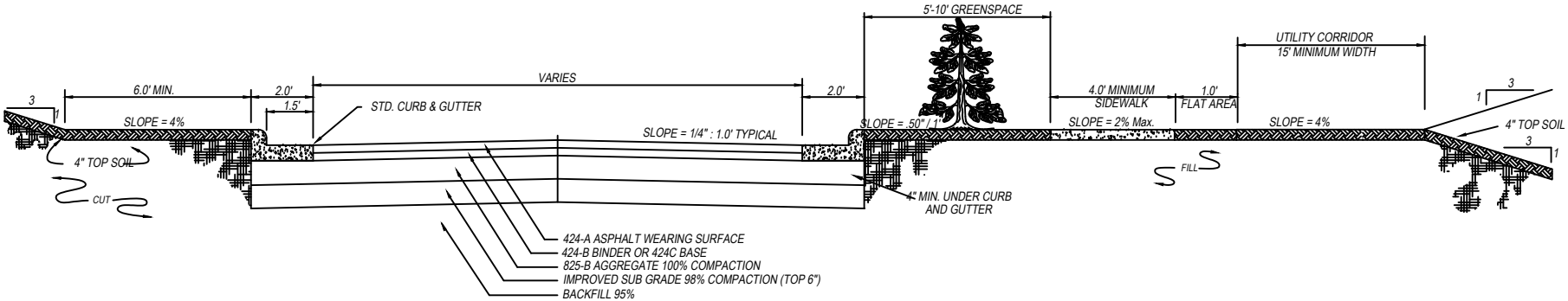
STANDARD DETAILS: STREETS	5.02
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	03-01-2024
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

TYPICAL STREET CROSS SECTION WITH A UTILITY CORRIDOR



NOTES:
1. The width of the greenspace must be at least 5'.
2. The utility corridor width will be determined by the City.
3. Additional right of way and/or easements required to accommodate the utility corridor.

TYPICAL STREET CROSS SECTION WITH A LANDSCAPE CORRIDOR



NOTES:
1. THE WIDTH OF THE GREENSPACE MUST BE AT LEAST 5'. IF THE GREENSPACE CONTAINS CANOPY TREES, A 10' MINIMUM WIDTH IS REQUIRED.
2. THE UTILITY CORRIDOR WIDTH SPECIFIED APPLIES WHERE A WATER MAIN IS INSTALLED ON THE NORTH AND EAST SIDES. OTHER WIDTHS MAY BE PERMITTED.
3. ADDITIONAL RIGHT OF WAY AND/OR EASEMENTS REQUIRED TO ACCOMODATE THE UTILITY CORRIDOR.
4. THE UTILITY CORRIDOR CAN BE USED ON BOTH SIDES OF THE STREET. MINIMUM WIDTHS AND CONFIGURATION WILL BE BASED ON THE PRESENCE OF SIDEWALK.

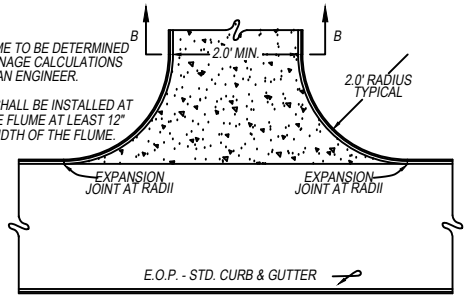
STANDARD DETAILS: STREETS	5.03
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

City of Auburn

FLUME DETAIL

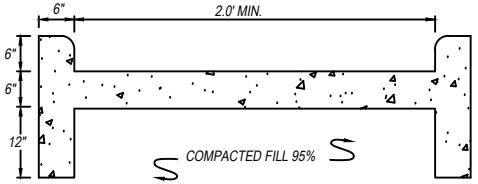
NOTES:

1. SIZE OF FLUME TO BE DETERMINED BASED ON DRAINAGE CALCULATIONS SUBMITTED BY AN ENGINEER.
2. A TOEWALL SHALL BE INSTALLED AT THE END OF THE FLUME AT LEAST 12" DEEP BY THE WIDTH OF THE FLUME.



FLUME DETAIL

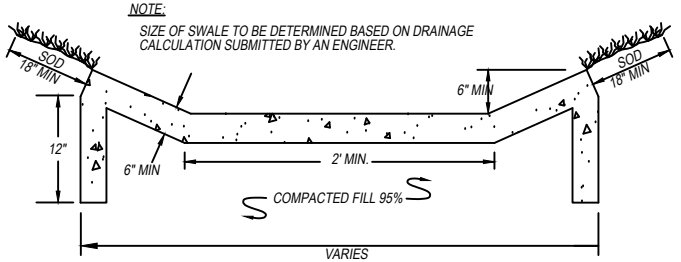
SECTION B-B



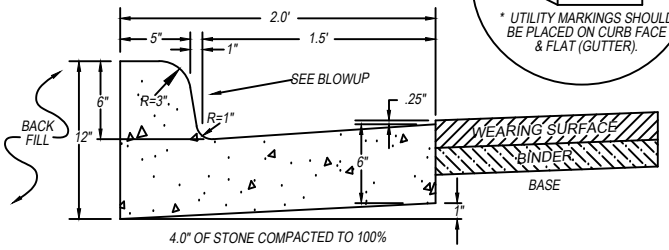
CONCRETE SWALE

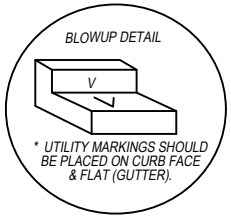
NOTE:

SIZE OF SWALE TO BE DETERMINED BASED ON DRAINAGE CALCULATION SUBMITTED BY AN ENGINEER.



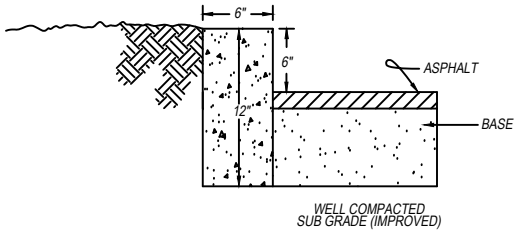
CURB & GUTTER



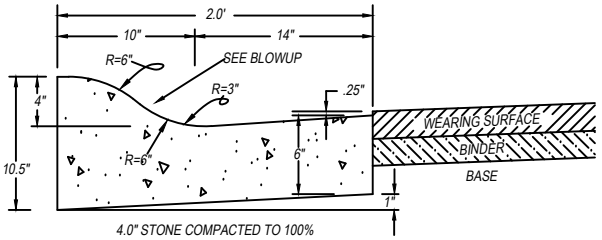


** USE OF SPILL CURB MUST BE REVIEWED AND APPROVED PRIOR TO INSTALLATION

HEADER CURB



ROLL CURB

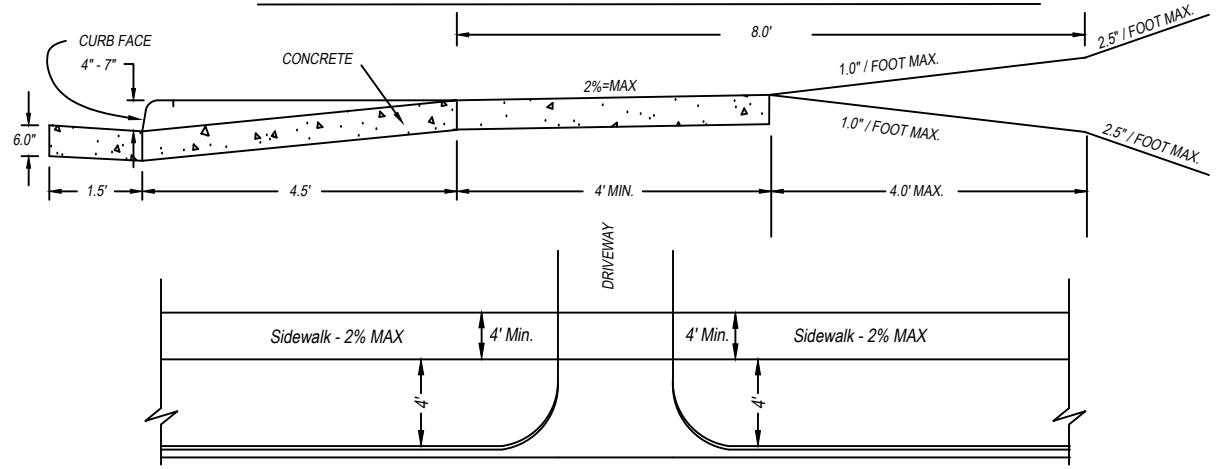


STANDARD DETAILS: STREETS	5.04

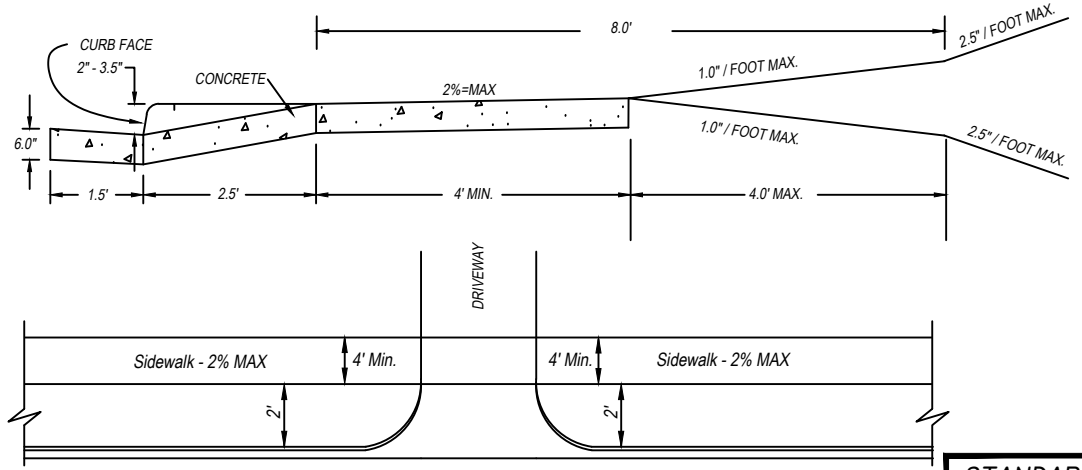
City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

DRIVEWAY / SIDEWALK WITH 4.0' GREENSPACE



DRIVEWAY / SIDEWALK WITH 2.0' GREENSPACE



STANDARD DETAILS: STREETS	5.05

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

NOTES:

1. SIDE SLOPES FOR STREETS SHALL VARY FROM A POINT SIX (6') FEET BEHIND THE CURB TO THE EXISTING ELEVATION AT THE RIGHT OF WAY (R.O.W.), EXCEPT THAT SUCH SLOPE SHALL NOT BE GREATER THAN 3:1. IN CASES WHERE A 3:1 SLOPE CARRIES THE CONSTRUCTION LIMITS BEYOND THE R.O.W. LINE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CLEARING & GRUBBING, EXCAVATION, BACKFILL, MULCHING OR ANY OTHER WORK REQUIRED TO ACCOMMODATE THE 3:1 SLOPE. IN CASES WHERE ROCK IS ENCOUNTERED, THE SLOPE MAY BE 2.5:1 IN THE ROCK PORTION.

2. FOR PORTLAND CEMENT CONCRETE PAVEMENTS, THE TYPICAL CROSS SECTION SHALL BE DESIGNED ON A CASE BY CASE BASIS.

3. CURB AND GUTTER SHALL BE CAST IN PLACE WITH THE FOLLOWING REQUIREMENTS: EXPANSION JOINT AT FIFTY (50.0') FOOT INTERVALS WITH DUMMY JOINTS AT TEN (10.0') FOOT INTERVALS. WHEN ELECTRIC, GAS, SEWER OR WATER SERVICE LINES ARE IN PLACE, AN "E", "G", "S" OR "W" SHALL BE MARKED ON CURB FACE AND FLAT/GUTTER AT THE APPROPRIATE LOCATION(S. AFTER THE CURB & GUTTER HAS BEEN CURED, EXTRA PRECAUTIONS WILL BE TAKEN DURING BACKFILLING AND/OR OTHER ACTIVITIES TO PREVENT DAMAGE OR MARRING OF FINISH; REFER TO CURB & GUTTER DETAILS FOR PLACEMENT OF UTILITY MARKINGS WITH A MIN. OF 4"x2" LETTERS.

4. ALL ROADWAY MATERIALS (ASPHALT AND CRUSHED AGGREGATE BASE) SHALL COMPLY WITH THE CURRENT ALDOT STANDARDS, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.

5. TACK POINTS (PRIME) SHALL BE APPLIED PRIOR TO WEARING SURFACE APPLICATION, AND BETWEEN LAYERS OF PAVEMENT MATERIAL FOR RESURFACING PROJECTS. TACK SHALL COMPLY WITH CURRENT ALDOT SPECIFICATIONS. IN ADDITION, IF PAVING OPERATION IS DELAYED, OR EDGES BECOME DIRTY OR MUDDY, ALL DIRT AND MUD MUST BE REMOVED PRIOR TO APPLYING TACK COAT.

6. BASE AND WEARING SURFACE REQUIREMENTS ARE BASED ON CBR OF 6-9 FOR SUBGRADE SOILS. ALTERNATE DESIGN FOR FULL DEPTH PAVEMENTS OR VARIANCE TO LISTED THICKNESSES WILL BE CONSIDERED ON A CASE BY CASE BASIS, BASED ON SUBGRADE SOILS AND/OR EXPECTED TRUCK TRAFFIC.

7. PROVIDE 1 1/2" DEEP BY 1/8" WIDE CONTROL JOINTS EVERY 5' WITH EXPANSION JOINTS EVERY 50'. EXPANSION MATERIAL CAN BE FIBER BOARD OR A TREATED 1X4.

8. FOR NON CURB AND GUTTER STREETS, A PAVED DRIVEWAY TURNOUT IS REQUIRED. SLOPES MUST MEET ILLUSTRATED REQUIREMENTS ON THESE DETAILS.

9. ALL TREE PLANTINGS WITHIN THE RIGHT OF WAY MUST BE APPROVED BY THE CITY OF AUBURN PUBLIC WORKS DEPARTMENT PRIOR TO INSTALLATION. PLANTINGS SHALL BE IN ACCORDANCE WITH THE STANDARD DETAIL.

10. WHEN A DEVELOPMENT WARRANTS THE WIDENING OF THE ROADWAY THAT WILL ALTER THE CURRENT TRAFFIC STRIPING, THE DEVELOPER, AT THEIR EXPENSE , SHALL PROVIDE A ONE INCH (1") OVERLAY. THE LIMITS OF THE OVERLAY SHALL COVER ALL TRAVEL LANES AND WILL BEGIN AND END AT THE LIMITS OF THE ALL ROADWAY IMPROVEMENTS.

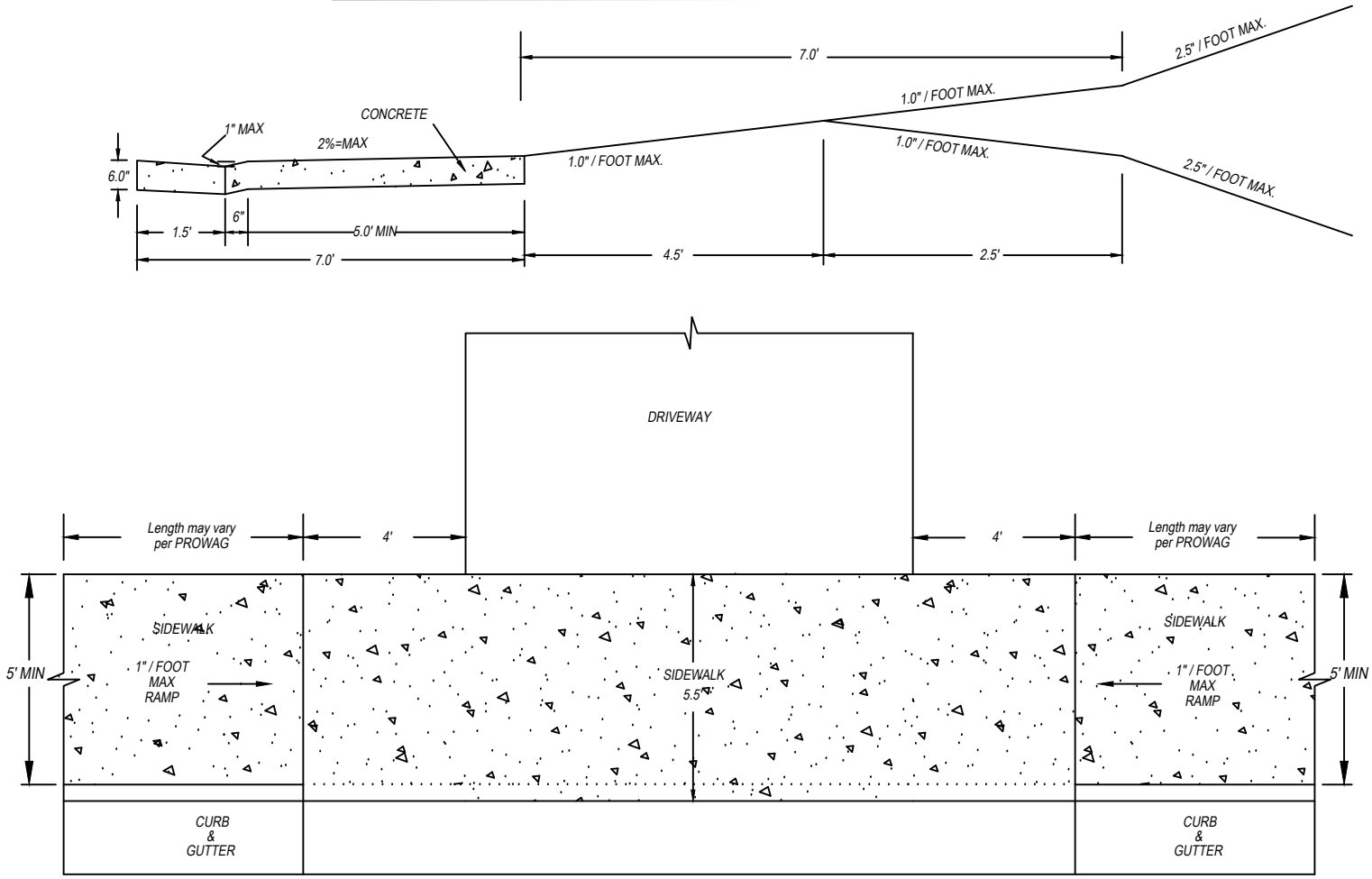
11. THE GUTTER DEPTH MAY BE USED TO ACCOUNT FOR THE DEPTH OF PARKING SPACE PROVIDED THERE IS A TWO FOOT GRASS STRIP BETWEEN THE BACK OF CURB AND THE FOUR FOOT WIDE SIDEWALK. IF SIDEWALK IS PLACED IMMEDIATELY ADJACENT TO THE BACK OF CURB AND THE GUTTER DEPTH IS USED FOR PARKING THE SIDEWALK SHALL BE INCREASED TO FIVE FEET WIDE. IN NO CASES SHALL THE GUTTER WIDTH BE COUNTED TOWARD THE WIDTH OF A PARKING SPACE.

12. JOINT SEAL SHALL BE PLACED ON THE BINDER LAYER IF THE WEARING SURFACE IS NOT APPLIED FOR 12 MONTHS.

13. SIDEWALK CROSS SLOPES SHALL BE 1% MINIMUM.

STANDARD DETAILS: STREETS	5.06
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	03-01-2024
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

DRIVEWAY / SIDEWALK WITHOUT GREENSPACE

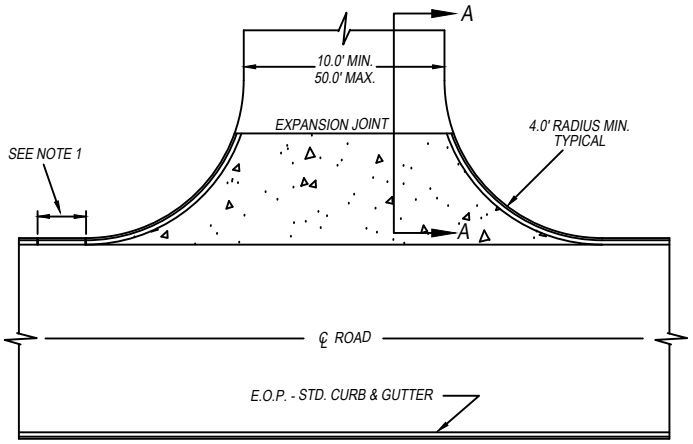


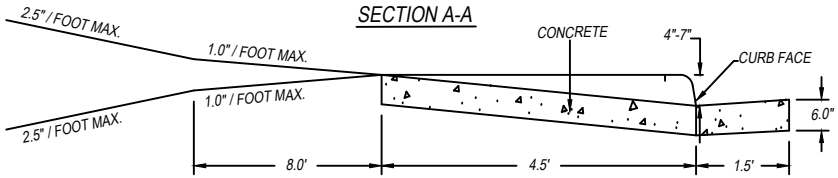
STANDARD DETAILS: STREETS	5.07

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

STANDARD DRIVEWAY



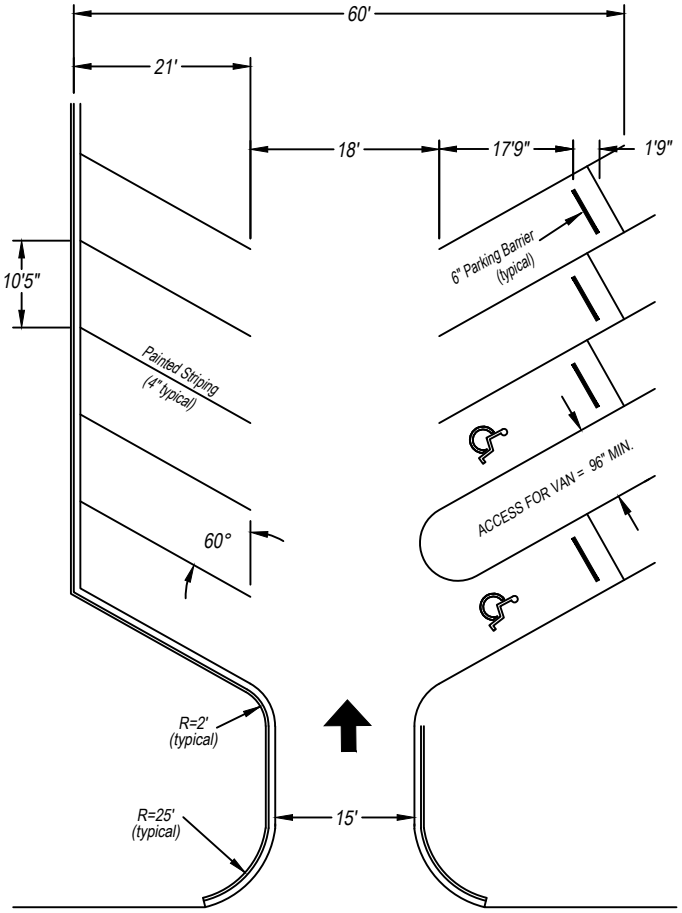


NOTES:

1. DISTANCE FROM RADIUS POINT TO EXISTING EXPANSION OR CONSTRUCTION JOINT SHALL BE AT LEAST 3'. IF THE DISTANCE IS LESS THAN 3.0', CURB & GUTTER SHALL BE REPLACED TO THE EXISTING JOINT.
2. EXPANSION JOINT TO BE PLACED AT TIE IN.
3. THE TEN FOOT MINIMUM WIDTH IS FOR RESIDENTIAL USES ON LOCAL STREETS, CUL-DE-SACS, AND ALLEYS. ALL OTHERS WILL BE TWELVE FOOT MINIMUM WIDTH. THE 50' WIDTH IS RESERVED FOR COMMERCIAL AND MULTI UNIT RESIDENTIAL DEVELOPMENTS.(FOR ALL OTHER RESIDENTIAL USES THE MAXIMUM DRIVEWAY WIDTH SHALL BE 24'. (See section 5.2.6 in the Engineering Design and Construction Manual for further guidance.)
4. DRIVEWAY TURNOUT WIDTHS ARE MEASURED AT THE RIGHT OF WAY.
5. REMOVE CURB & GUTTER FOR DRIVEWAY TURNOUT PLACEMENT. SAW CUTTING IS PERMITTED ALONG THE CURB LINE / GUTTER TO MAINTAIN EXISTING GUTTER.
6. ALL CONCRETE SHALL BE A MINIMUM OF SIX INCHES THICK.
7. RADII FOR USES OTHER THAN RESIDENTIAL MUST BE TWENTY-FIVE FOOT, MINIMUM.
8. ON STREETS WITH SIDEWALK CONCRETE DRIVEWAY TURNOUT MUST EXTEND TO THE BACK EDGE OF THE SIDEWALK.
9. CONCRETE DRIVEWAY TURNOUT MUST MEET CITY STANDARDS OR CAN BE DESIGNED TO SITE SPECIFIC CONDITIONS.
10. IF ON A NON-CURB AND GUTTER STREET AN ASPHALT APRON MAY BE UTILIZED.

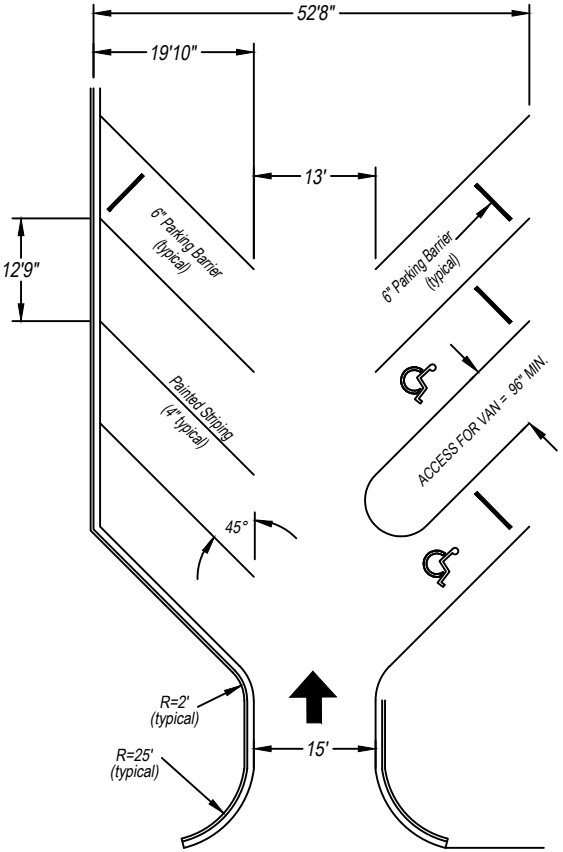
STANDARD DETAILS: STREETS	5.08
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	03-01-2024
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

PARKING PLAN - 60° PARKING



NOTE: ALLOW 3'9" FOR REAR OVERHANG.

PARKING PLAN - 45° PARKING

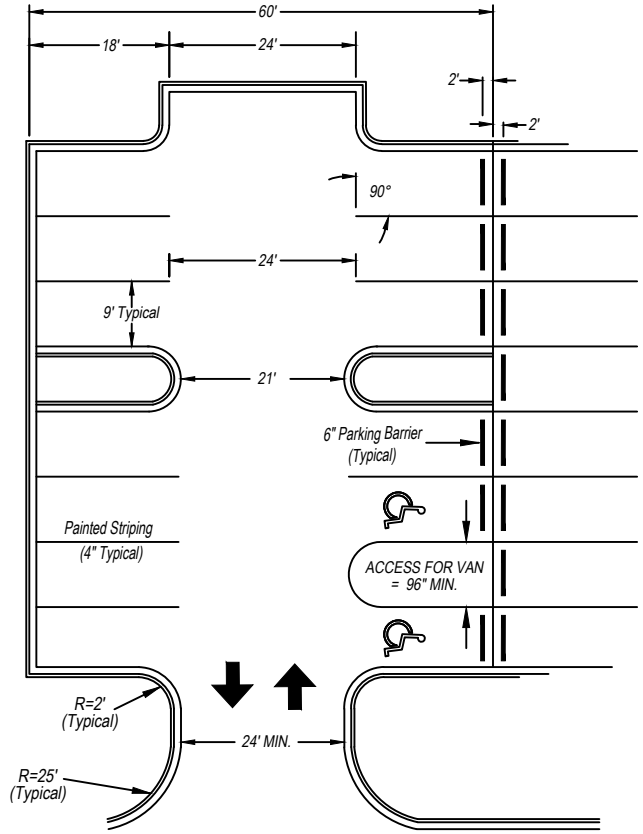


NOTE: ALLOW 3'3" FOR REAR OVERHANG.

STANDARD DETAILS: STREETS	5.09
City of Auburn	

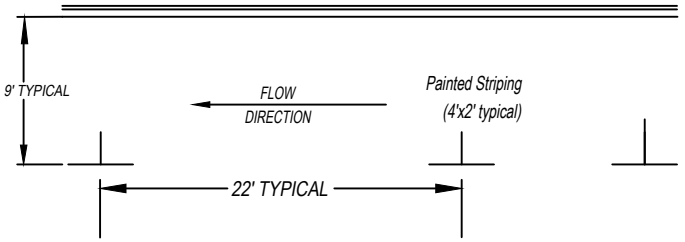
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

PARKING PLAN - 90° PARKING



NOTE: ALLOW 4' FOR REAR OVERHANG.

PARKING PLAN - PARALLEL PARKING



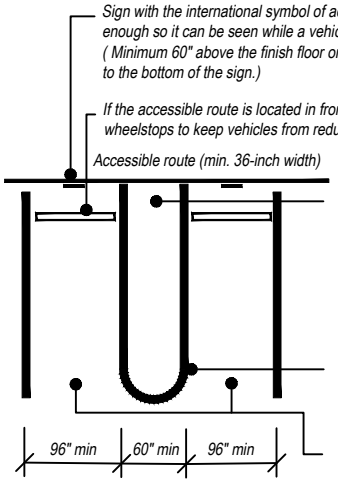
STANDARD DETAILS: STREETS	5.10

City of Auburn

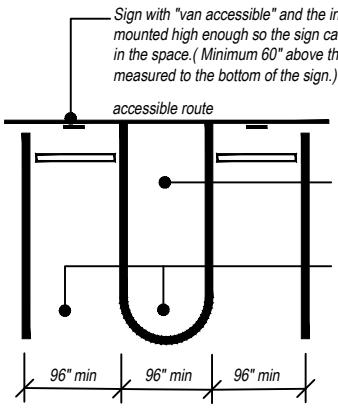
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

ACCESSIBLE PARKING

Features of Accessible Parking Spaces for Cars



Three Additional Features for Van-Accessible Parking Spaces



ACCESSIBLE PARKING SPACES	
TOTAL PARKING SPACES PROVIDED	REQUIRED MINIMUM NUMBER OF ACCESSIBLE SPACES
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1,000	2% of total
501 to 1,000	20, plus one for each 100 over 1,000

Where parking is provided, accessible parking spaces shall be provided in accordance with this table.

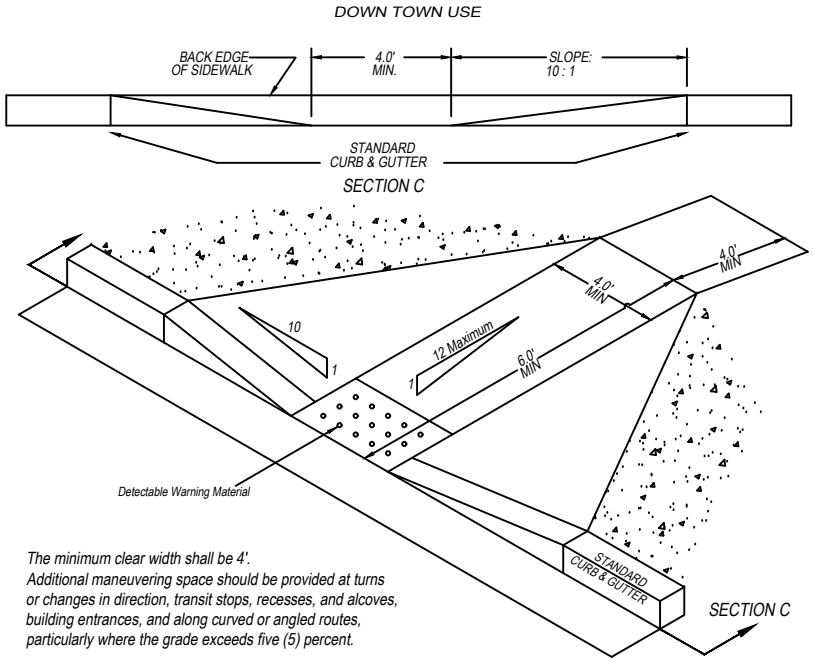
REFERENCE:
INTERNATIONAL BUILDING CODE, LATEST EDITION.

STANDARD DETAILS: STREETS 5.11

City of Auburn

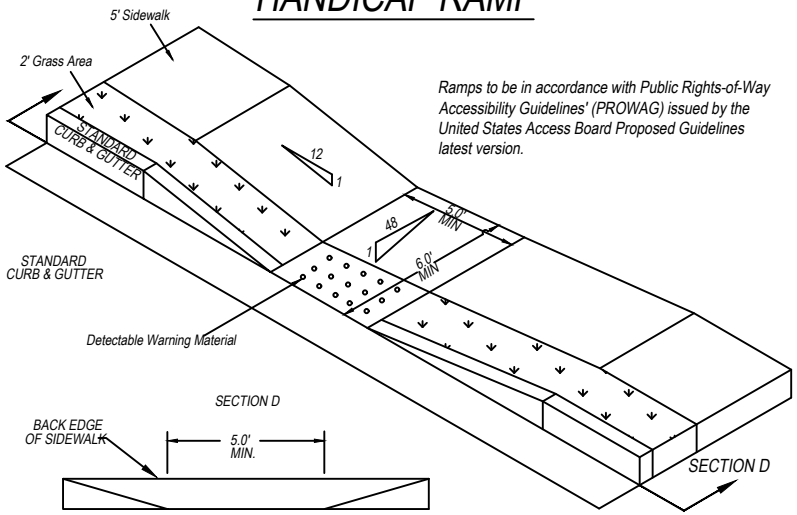
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

HANDICAP RAMP



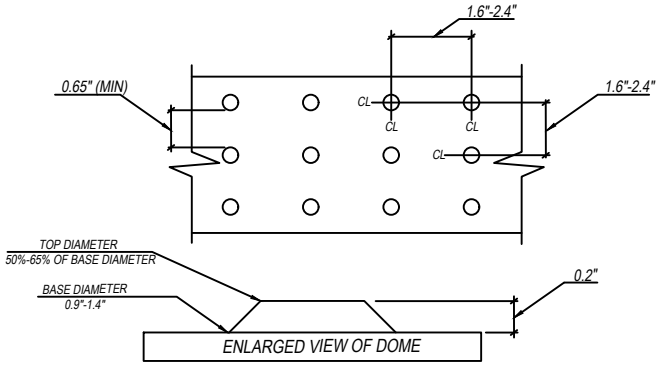
The minimum clear width shall be 4'.
Additional maneuvering space should be provided at turns or changes in direction, transit stops, recesses, and alcoves, building entrances, and along curved or angled routes, particularly where the grade exceeds five (5) percent.

HANDICAP RAMP



Ramps to be in accordance with Public Rights-of-Way Accessibility Guidelines' (PROWAG) issued by the United States Access Board Proposed Guidelines latest version.

DETECTABLE WARNING AT HANDICAP RAMP

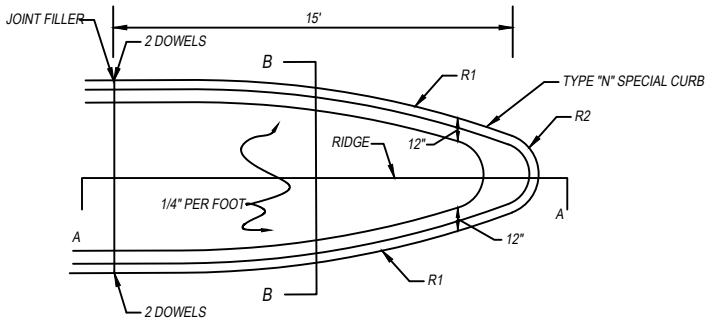


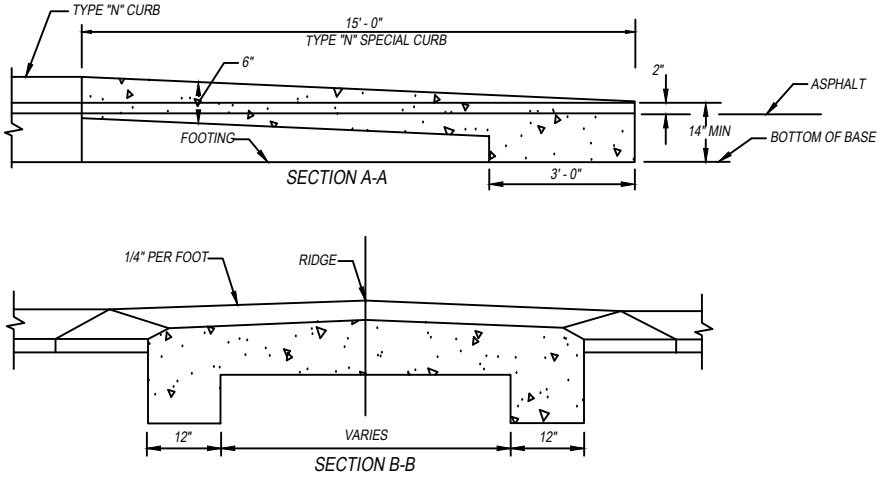
NOTES:

1. DETECTABLE WARNINGS SHALL CONSIST OF A SURFACE OF TRUNCATED DOMES AND SHALL COMPLY WITH APPLICABLE ADA REGULATIONS.
2. DOME SIZE: TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL HAVE A BASE DIAMETER OF 0.9 INCH MINIMUM TO 1.4 INCHES MAXIMUM, A TOP DIAMETER OF 50 PERCENT OF THE BASE DIAMETER MINIMUM TO 65 PERCENT OF THE BASE DIAMETER MAXIMUM, AND HEIGHT OF 0.2 INCH
3. DOME SPACING: TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL HAVE A CENTER-TO-CENTER SPACING OF 1.6 INCHES MINIMUM AND 2.4 INCHES MAXIMUM, AND A BASE-TO-BASE SPACING OF 0.65 INCH MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES.
4. CONTRAST: DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT GUTTER, STREET OR HIGHWAY, OR WALKWAY SURFACE EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT.
5. SIZE: DETECTABLE WARNING SURFACES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP (EXCLUSIVE OF FLARES), THE LANDING, OR THE BLENDED TRANSITION.

STANDARD DETAILS: STREETS	5.12
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	03-01-2024
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

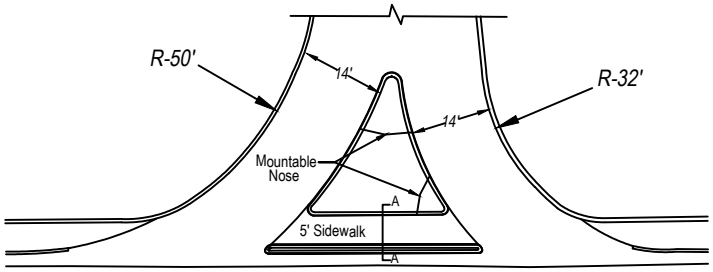
MOUNTABLE ISLAND NOSE





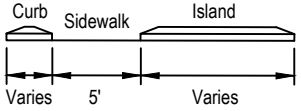
NOTES:
1. R1 = TURNING SPEED RADIUS: 20 MPH = 90', 25 MPH = 150', 30 MPH = 230'. R1 SHALL BE A MINIMUM OF 80'.
2. R2 = 1/2 MEDIAN WIDTH (MAXIMUM) BUT ACCEPTABLE WHEN R2 IS APPROXIMATELY 1/5 OF MEDIAN WIDTH.

RIGHT IN RIGHT OUT DETAIL



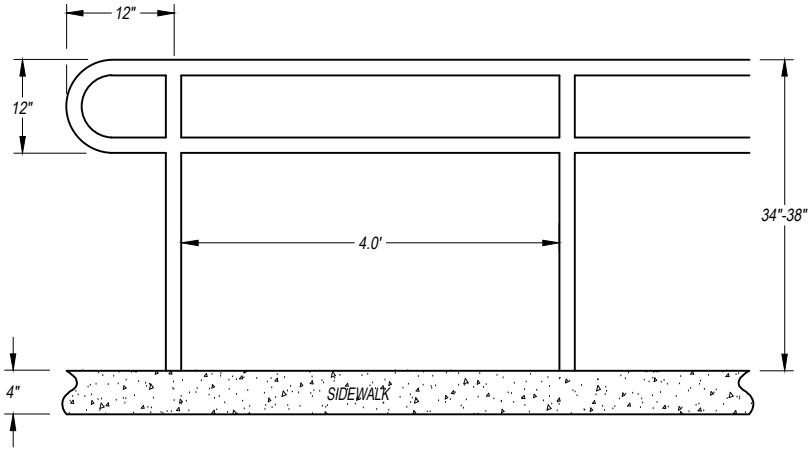
RIGHT IN RIGHT OUT DETAIL

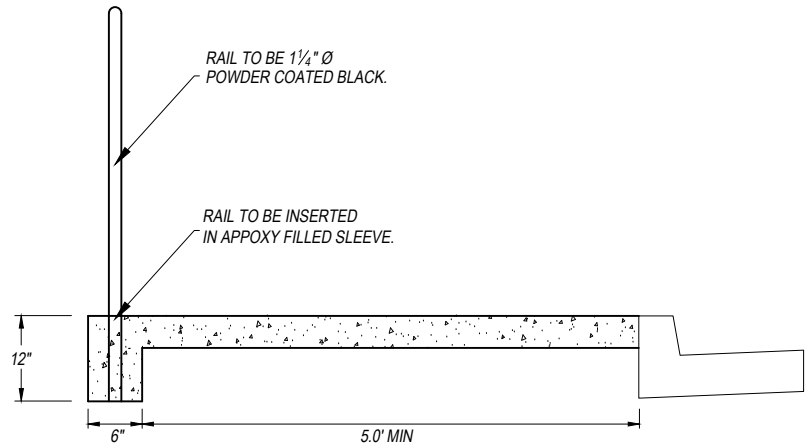
Detail A-A



STANDARD DETAILS: STREETS	5.13
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

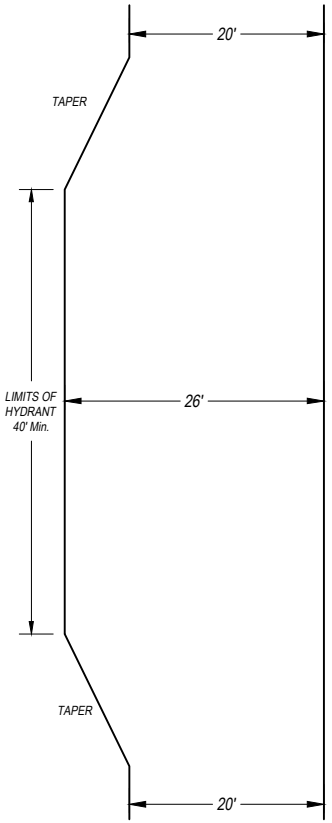
SIDEWALK GUARDRAIL DETAIL





RIGHT ALT. VIEW

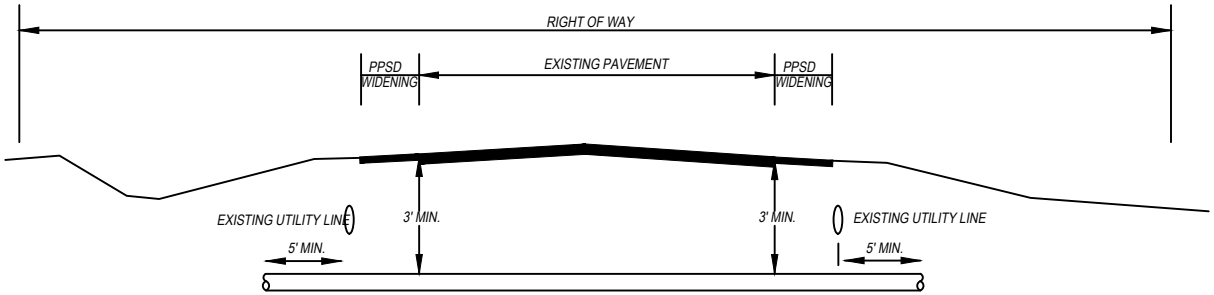
ROADWAY FLARE AT HYDRANT



When a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet from EP - EP for non curb and gutter streets, exclusive of shoulders, or from face of curb - face of curb for curb and gutter streets, for at least 40 feet at the hydrant.

STANDARD DETAILS: STREETS	5.14
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	03-01-2024
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

JACK & BORE DETAIL



NOTES:
1. CASING SHOULD EXTEND AT LEAST 5' BEYOND EXISTING UTILITIES OR EDGE OF PAVEMENT, WHICHEVER IS GREATER.
2. IF WIDENING PLANS EXIST FOR THE ROADWAY TO BE BORED, ADDITIONAL CASING LENGTH MAY BE REQUIRED.
3. SPECIFIC INFORMATION ON BORING UNDER ROADWAYS IS FOUND IN THE PUBLIC WORKS DESIGN AND CONSTRUCTION MANUAL.
4. FOR WATER MAINS LOCATED WITHIN THE ENCASEMENT, THE MAIN SHALL DEFLECT IMMEDIATELY AFTER EXITING THE ENCASEMENT USING TWO 45-DEGREE BENDS TO ALLOW FOR FUTURE MAINTENANCE ON THE MAIN.

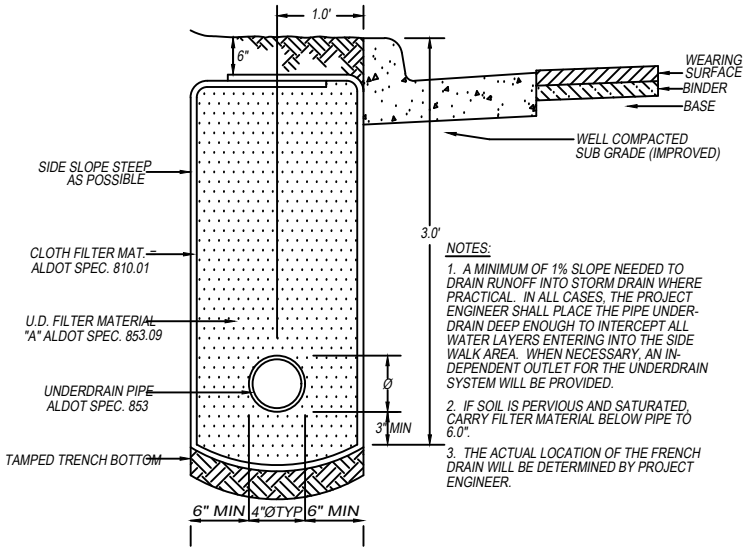
ENCASEMENT SIZING
WATER AND SANITARY SEWER

CARRIER PIPE		SPACER	STEEL ENCASEMENT	
NOMINAL PIPE DIAMETER	STANDARD PIPE BELL O.D.	CASING SPACER BAND WIDTH	MINIMUM CASING THICKNESS	MINIMUM CASING DIAMETER
4	6.40	8	0.25	14
6	8.60	8	0.25	16
8	11.16	8	0.25	18
10	13.25	8	0.25	20
12	15.22	8	0.25	22
14	17.73	12	0.25	24
16	19.86	12	0.3125	26
18	22.16	12	0.3125	30
20	24.28	12	0.3125	32
24	28.50	12	0.3125	36
30	34.95	12	0.5	42
36	41.37	12	0.5	48

ALL SIZES INDICATED ARE IN INCHES.

*CASING DIAMETERS BASED ON BEING A MINIMUM OF 6 INCHES GREATER THAN THE OUTER DIAMETER OF THE JOINT BELL, TO THE NEAREST EVEN SIZE.

PIPE UNDERDRAIN W/CURB & GUTTER



NOTES:

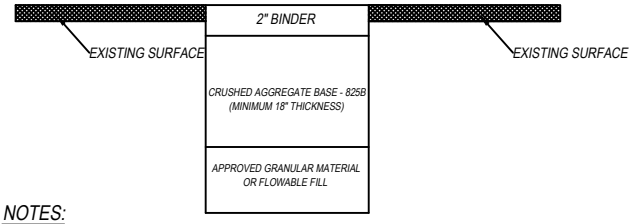
1. A MINIMUM OF 1% SLOPE NEEDED TO DRAIN RUNOFF INTO STORM DRAIN WHERE PRACTICAL. IN ALL CASES, THE PROJECT ENGINEER SHALL PLACE THE PIPE UNDER-DRAIN DEEP ENOUGH TO INTERCEPT ALL WATER LAYERS ENTERING INTO THE SIDE WALK AREA. WHEN NECESSARY, AN IN-DEPENDENT OUTLET FOR THE UNDERDRAIN SYSTEM WILL BE PROVIDED.
2. IF SOIL IS PERVIOUS AND SATURATED, CARRY FILTER MATERIAL BELOW PIPE TO 6.0".
3. THE ACTUAL LOCATION OF THE FRENCH DRAIN WILL BE DETERMINED BY PROJECT ENGINEER.

STANDARD DETAILS: STREETS	5.15

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

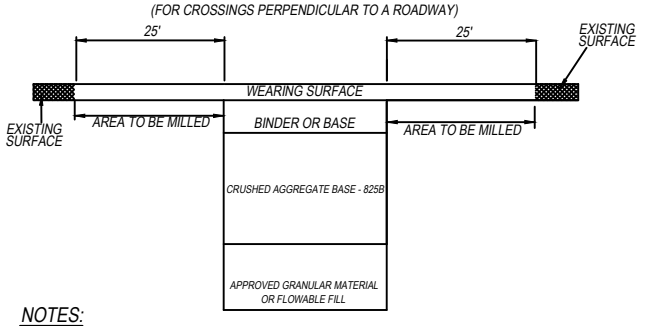
TEMPORARY UTILITY PATCH DETAIL



NOTES:

1. EDGES SHALL BE SAW CUT, VERTICAL AND SMOOTH OR JACK HAMMERED AND COATED WITH TACK.
2. 2" OF ASPHALT MUST BE PLACED IMMEDIATELY FOLLOWING WORK AND BE IN PLACE AT LEAST EIGHT WEEKS PRIOR TO PLACING THE FINAL PATCH.
3. ASPHALT AND CRUSHED AGGREGATE BASE MATERIALS SHALL BE IN ACCORDANCE WITH ALDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
4. APPROVED GRANULAR MATERIAL AND 825B TO BE COMPACTED IN EIGHT (8") LIFTS.
5. FLOWABLE FILL MUST BE PRE-APPROVED.

PERMANENT UTILITY PATCH DETAIL



NOTES:

1. PERMANENT PATCH MUST BE PLACED 25' EACH SIDE OF TRENCH FOLLOWING THE EIGHT WEEK TIME. ALL TEMPORARY ASPHALT MUST BE REMOVED. ANY DEVIATION TO THIS SEQUENCE MUST BE APPROVED BY THE CITY ENGINEER. MILLING IS REQUIRED ALONG ALL EDGES AND THE OVERLAY TO MATCH ADJACENT CONDITIONS.
2. FOR FOUR (4) LANE ROADWAYS, THE OVERLAY SHOULD EXTEND TO THE NEAREST LANE. MILLING IS REQUIRED ALONG ALL EDGES OF PAVEMENT.
3. ASPHALT AND CRUSHED AGGREGATE BASE MATERIALS SHALL BE IN ACCORDANCE WITH ALDOT
4. FOR UTILITY PATCHES RUNNING PARALLEL TO THE ROADWAY, PATCHING SHALL BE THE FULL WIDTH OF THE ROAD.
5. IF THE FULL 25' PATCH IS WAIVED BY THE CITY ENGINEER BASED ON THE EXISTING ROADWAY CONDITIONS, THE PERMANENT PATCH SHALL EXTEND ONE (1') FOOT ON EITHER SIDE OF THE TRENCH.
6. EDGES SHALL BE SAW CUT, VERTICAL AND SMOOTH OR JACK HAMMERED AND COATED WITH TACK.

	0 TO 2,000 VPD		2,001 TO 5,000 VPD		5,001 AND GREATER	
CLASSIFICATION	ALLEY/CUL-DE-SAC LOCAL RESIDENTIAL		RESIDENTIAL COLLECTOR		COLLECTOR/ARTERIAL LOCAL COMMERCIAL	
	CLASS II		CLASS III		CLASS IV	
	FULL DEPTH	ASPHALT/BASE	FULL DEPTH	ASPHALT/BASE	FULL DEPTH	ASPHALT/BASE
WEARING SURFACE (424A)	1"	1"	2"	1"	2"	1"
BINDER (424B) OR BASE (424C)	* 4"	2"	* 5"	* 4"	* 6"	* 4"
CRUSHED AGGREGATE BASE 825B		6"		6"		* 9"

NOTES: MIXES SHALL COMPLY WITH THE LATEST EDITION OF THE ALABAMA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
* BINDER OR BASE LAYER TO BE PLACED IN TWO EQUAL LIFTS.

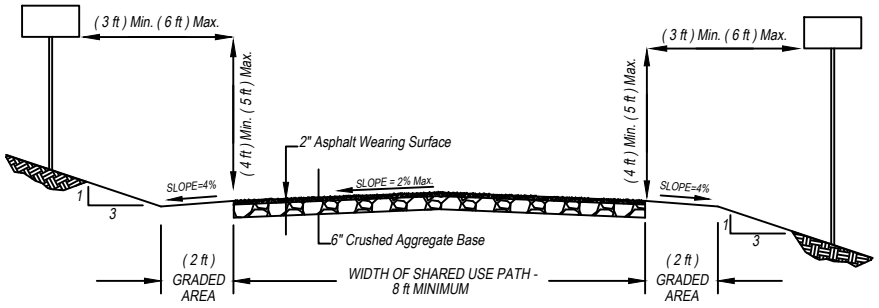
STANDARD DETAILS: STREETS 5.16

City of Auburn

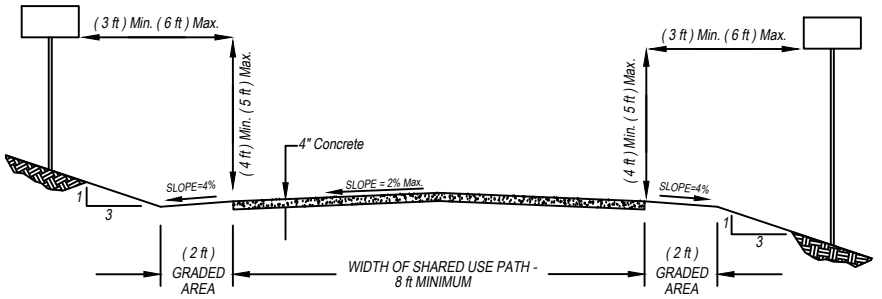
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

MULTI USE PATH FOR TWO-WAY SHARED ON SEPARATED RIGHT-OF-WAY

ASPHALT SIDEWALK AND TRAILS



CONCRETE SIDEWALK AND TRAILS



MULTI USE PATH CONFIGURATIONS				
	PRIMARY PATH WIDTH	PRIMARY PATH DEPTH	SECONDARY PATH WIDTH	SECONDARY PATH DEPTH
ASPHALT	12.0'	2.0"/6.0"	8.0'	2.0"/6.0"
CONCRETE	12.0'	6.0"	8.0'	4.0"

AASHTO, GUIDE FOR THE DEVELOPMENT OF BICYCLE FACILITIES

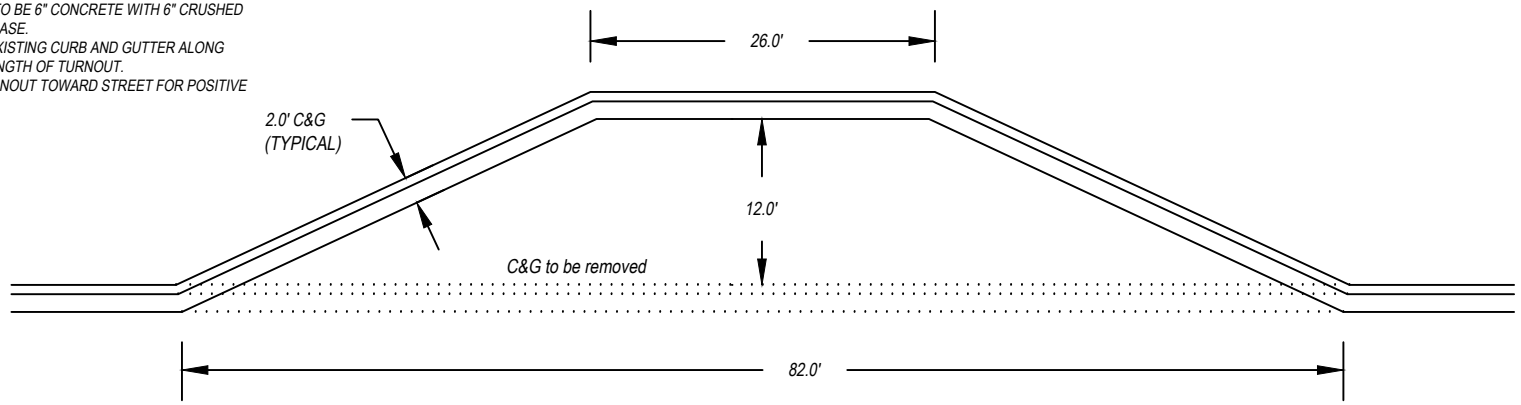
STANDARD DETAILS: STREETS 5.17

City of Auburn

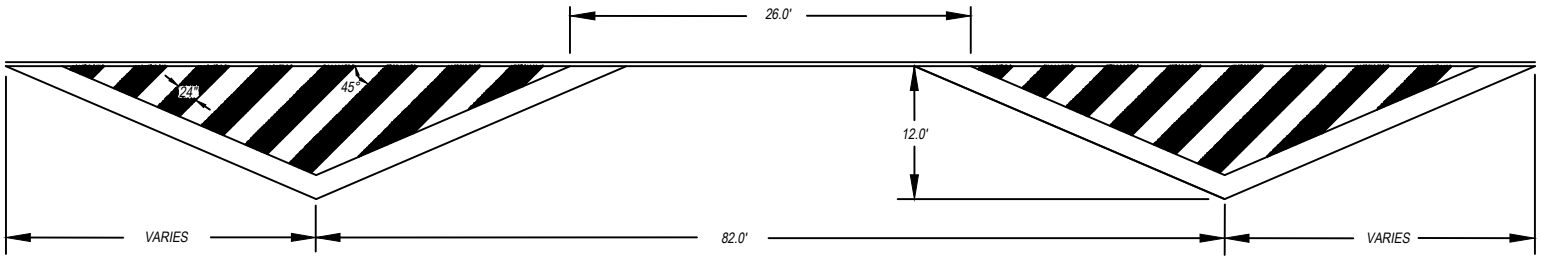
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

NOTES:
1. TURNOUT TO BE 6" CONCRETE WITH 6" CRUSHED AGGREGATE BASE.
2. REMOVE EXISTING CURB AND GUTTER ALONG COMPLETE LENGTH OF TURNOUT.
3. SLOPE TURNOUT TOWARD STREET FOR POSITIVE DRAINAGE.

BUS TURNOUT

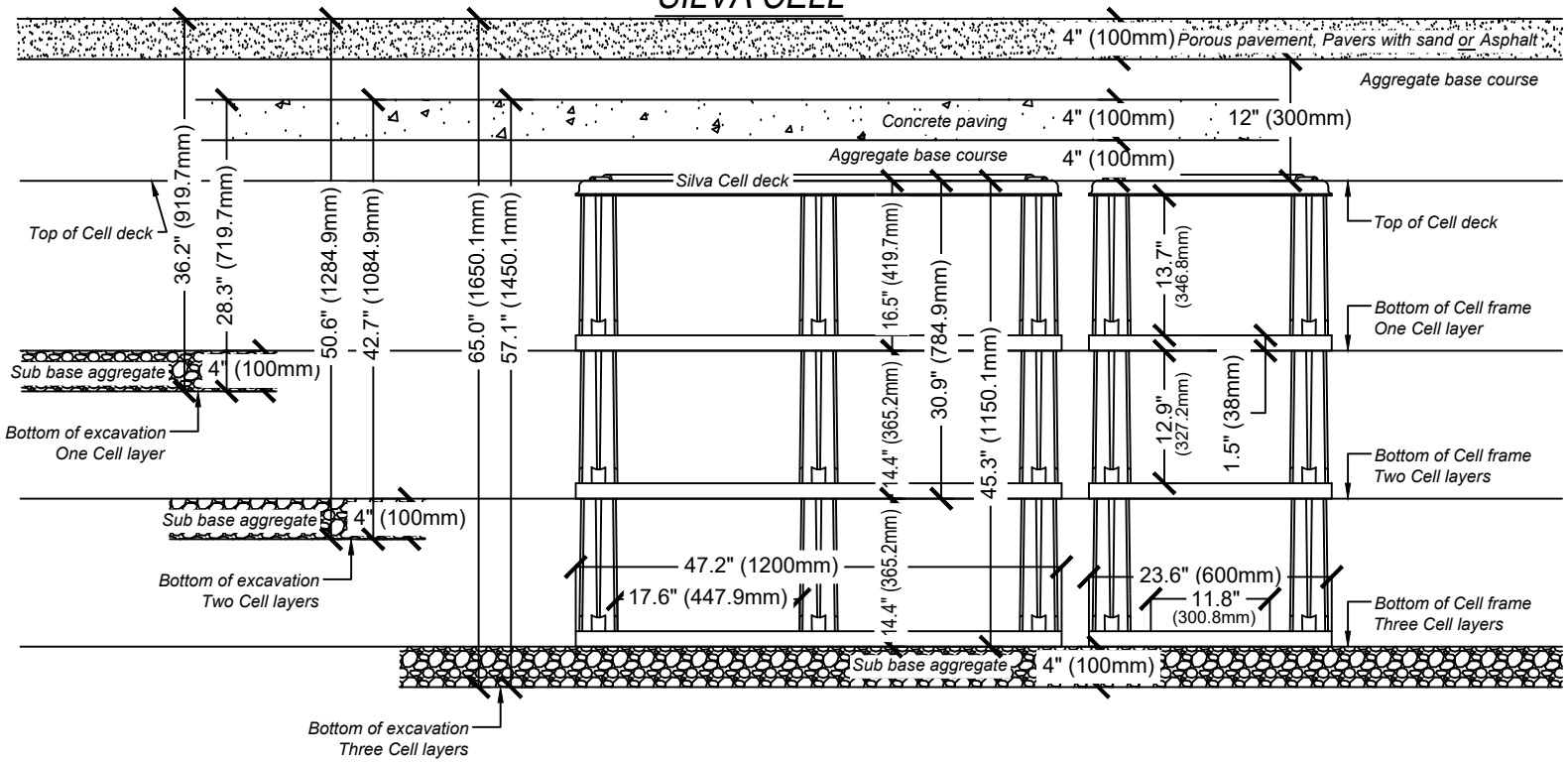


BUS TURNOUT DETAIL PAINTED



STANDARD DETAILS: STREETS	5.18
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

SILVA CELL



This detail shall be used in conjunction with Silva Cells for Trees Details and Specifications.

The above information contained in this standard detail is not to scale.

The standard detail is provided for general education and informational purposes only and does not constitute an endorsement, approval or recommendation of any kind. The actual suitability and applicability of this information for a given use depends upon a wide variety of considerations, including specific project specifications, over which DeepRoot® has no information or control. This standard detail should NOT be used as a basis for volume calculations that are site specific and vary greatly depending on cell and deck spacing, soil conditions and soil compaction. All DeepRoot® Silva Cell products are sold with the understanding that the purchaser, either individually or in consultation with purchaser's design professionals, has independently determined the suitability of each product for the application for which it is purchased. Except as expressly provided, DeepRoot® disclaims all warranties, express or implied, and strongly encourages the reader to consult with a construction/design professional and/or engineer before applying any of this information to a specific use or purpose.

Contractor shall resolve utility conflicts using the manufacturers recommended utility conflict details.

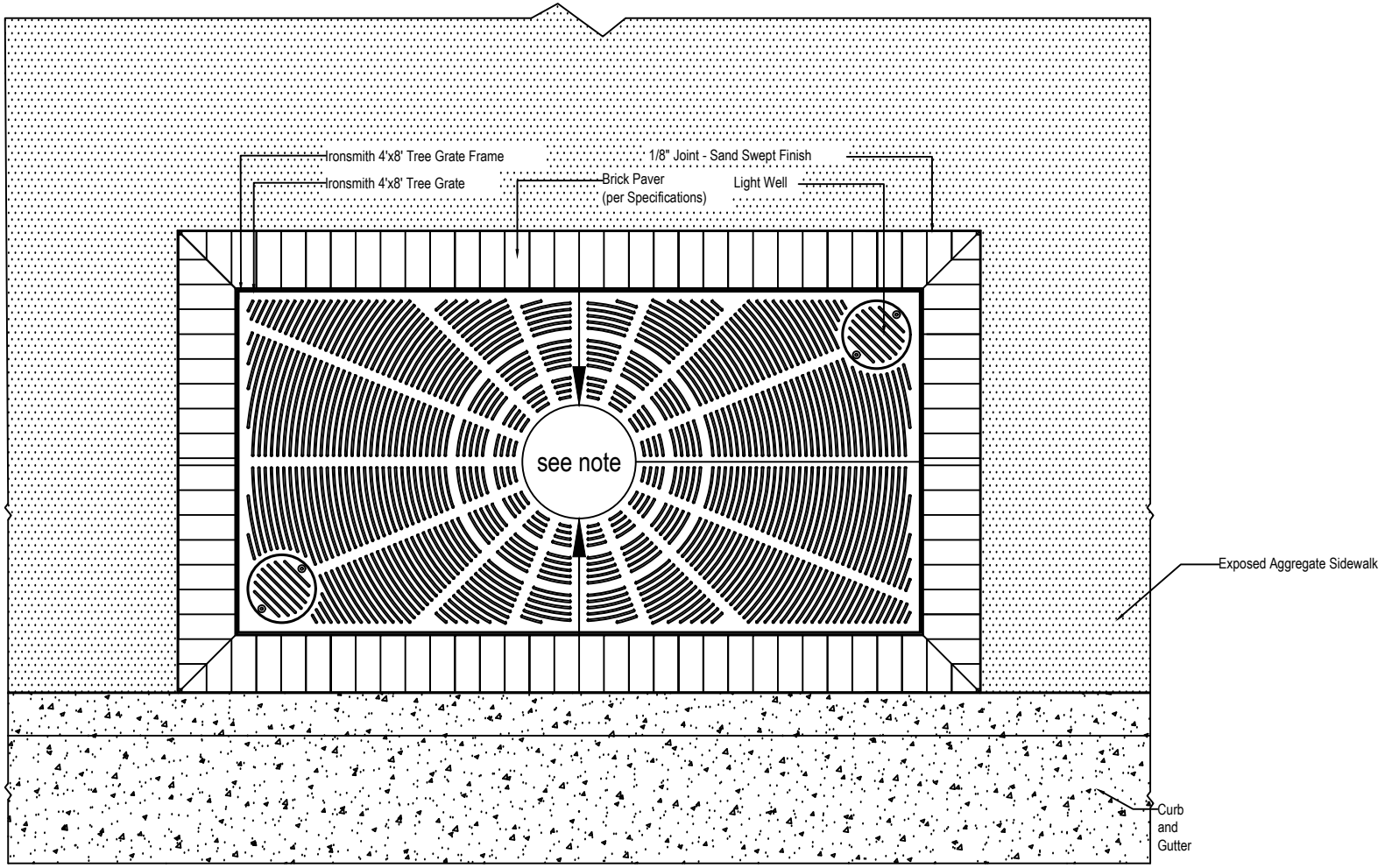
Deep Root Partners L.P.
530 Washington Street
San Francisco, California 94111
Ph. 415 781-9700
www.deeproot.com

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STANDARD DETAILS: STREETS	5.19
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

City of Auburn

TREE GRATE



TREE GRATE #M9628
STYLE: OLYMPIAN

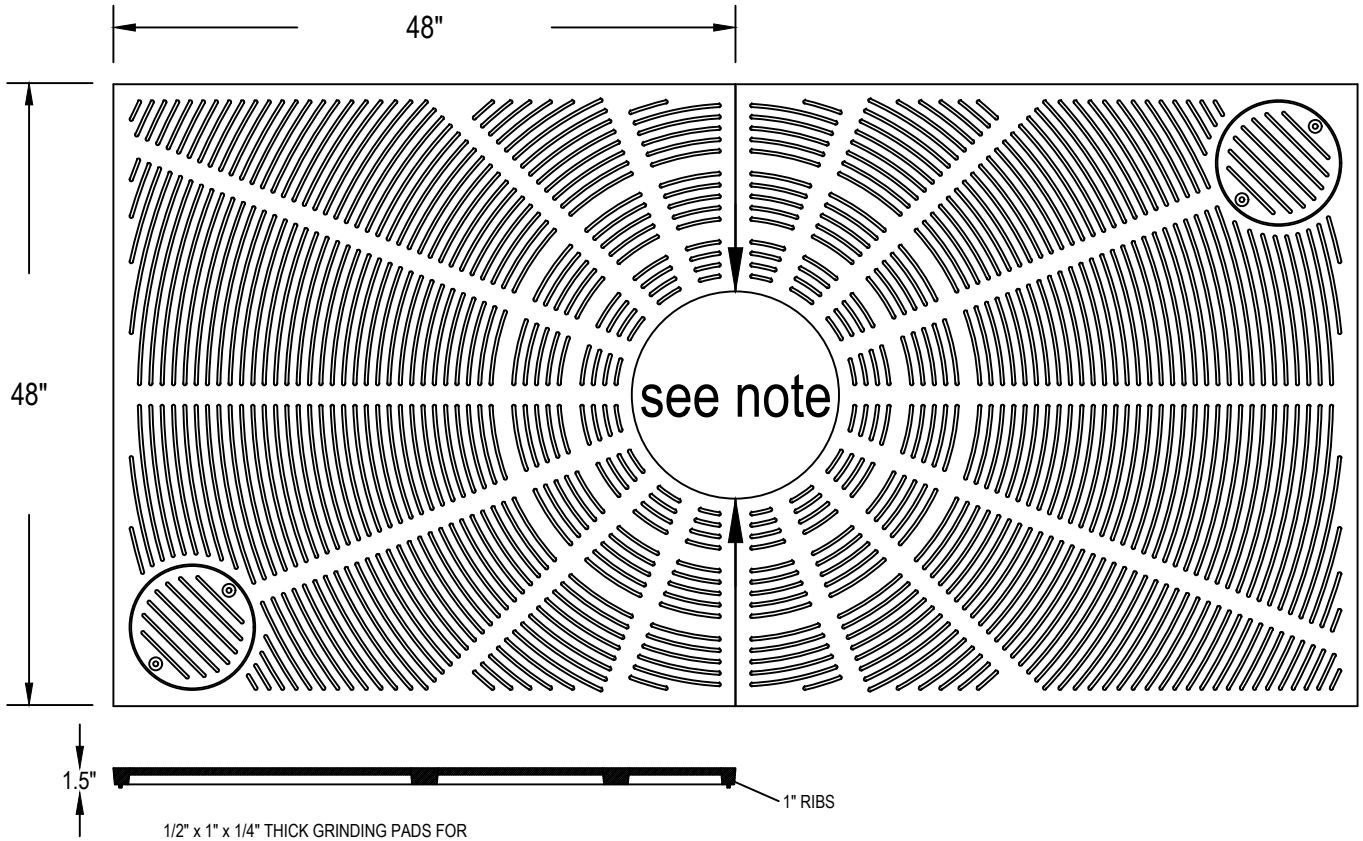
NOTE:
1. BRICK PAVER COLOR- PINE HALL BRICK ENGLISH EDGE FULL RANGE, OR APPROVED EQUAL.

STANDARD DETAILS: STREETS	5.20

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
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CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

TREE GRATE



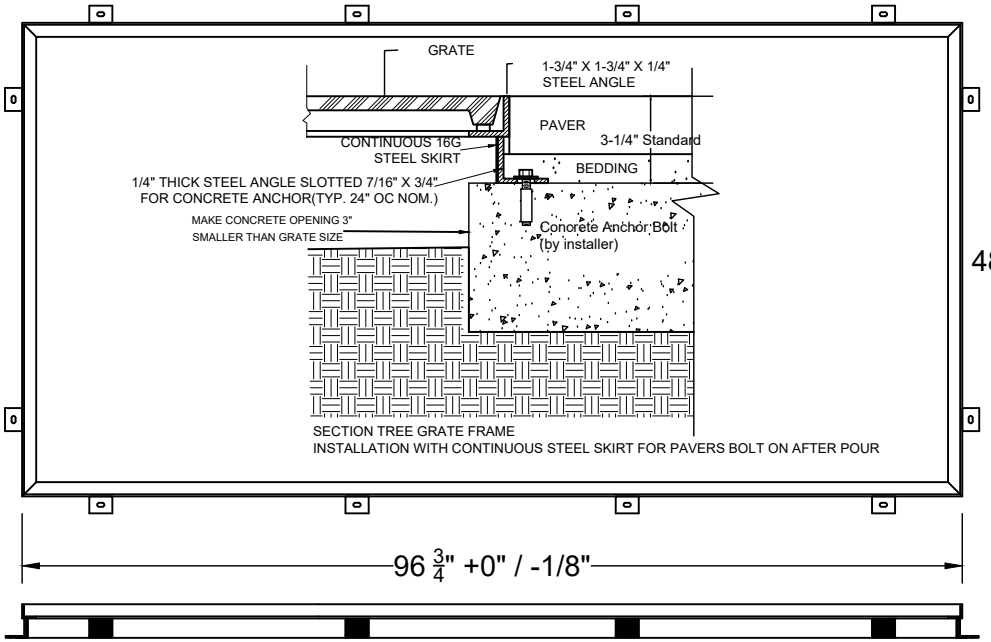
SLOT WIDTH IS 1/4" MAXIMUM, MEETS ADA COMPLIANCE.
GRATE CAST FROM GRAY IRON
TREE OPENING SIZE TO BE 16"
STEEL ANGLE FRAME REQUIRED
FOR INSTALLATION USE MODEL M48X96F
OUTER FRAME DIM. IS 3/4" ± 1/8"
GREATER THAN GRATE.

STANDARD DETAILS: STREETS	5.21

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

TREE GRATE



RECTANGULAR
TREE GRATE FRAME
M48X96F -6

WITH DEAIL #6
BOLT IN INSTALLATION WITH
CONTINOUS STEEL SKIRT

ANCHORS : CONCRETE
ANCHOR BOLT BY
INSTALLER.

FRAME JIG WELDED FROM
1-3/4" x 1-3/4" x 1/4" STEEL
ANGLE PER ASTM A36

FRAME FINISH:
POWDER COAT-BLACK

OTHER INSTALLATION
CONFIGURATIONS
AVAILABLE

IRONSMITH
41-701 CORPORATE WAY, #3
PALM DESERT, CA 92260
(800) 338-4766

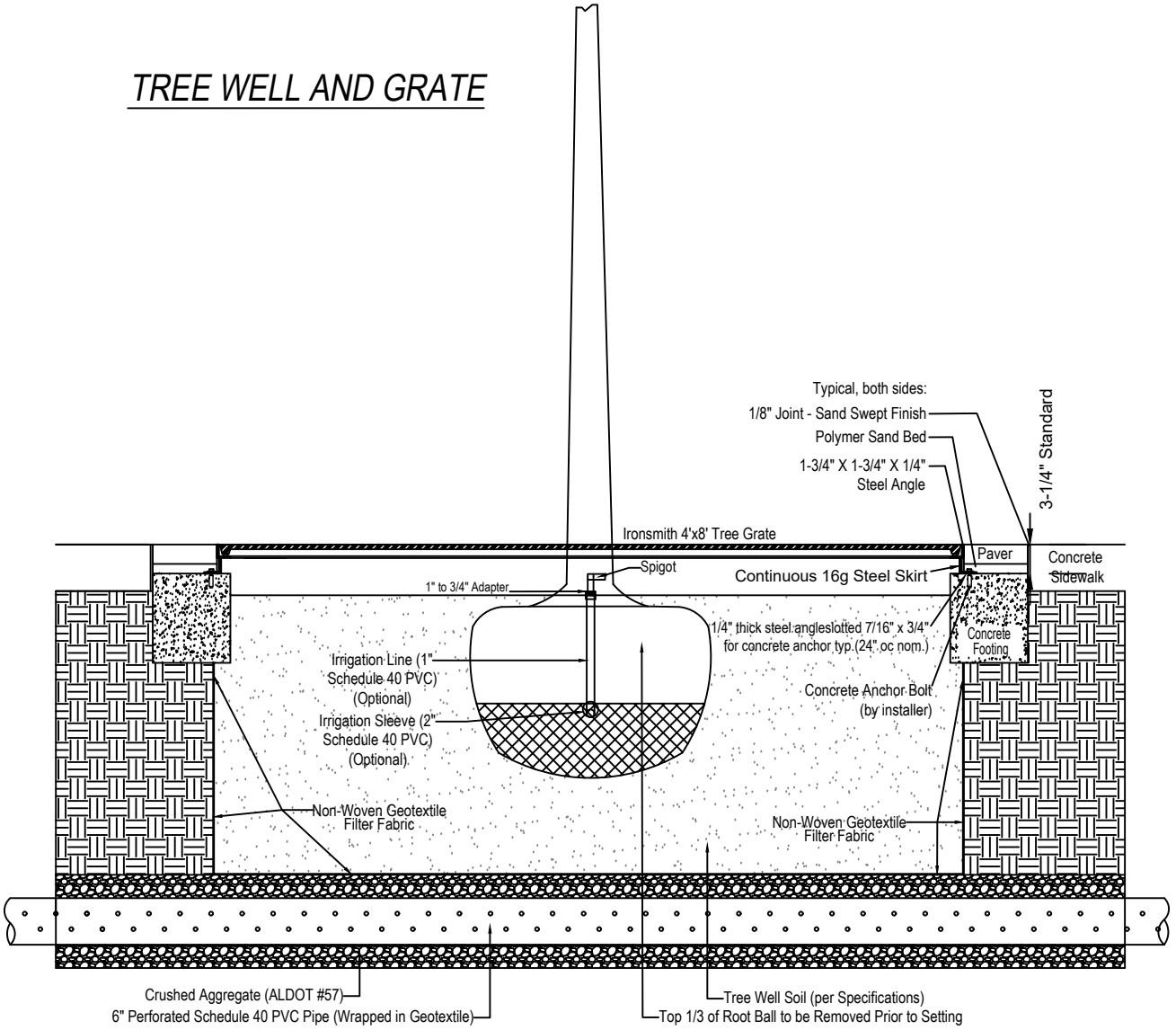
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STANDARD DETAILS: STREETS	5.22
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
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APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

City of Auburn

TREE WELL AND GRATE

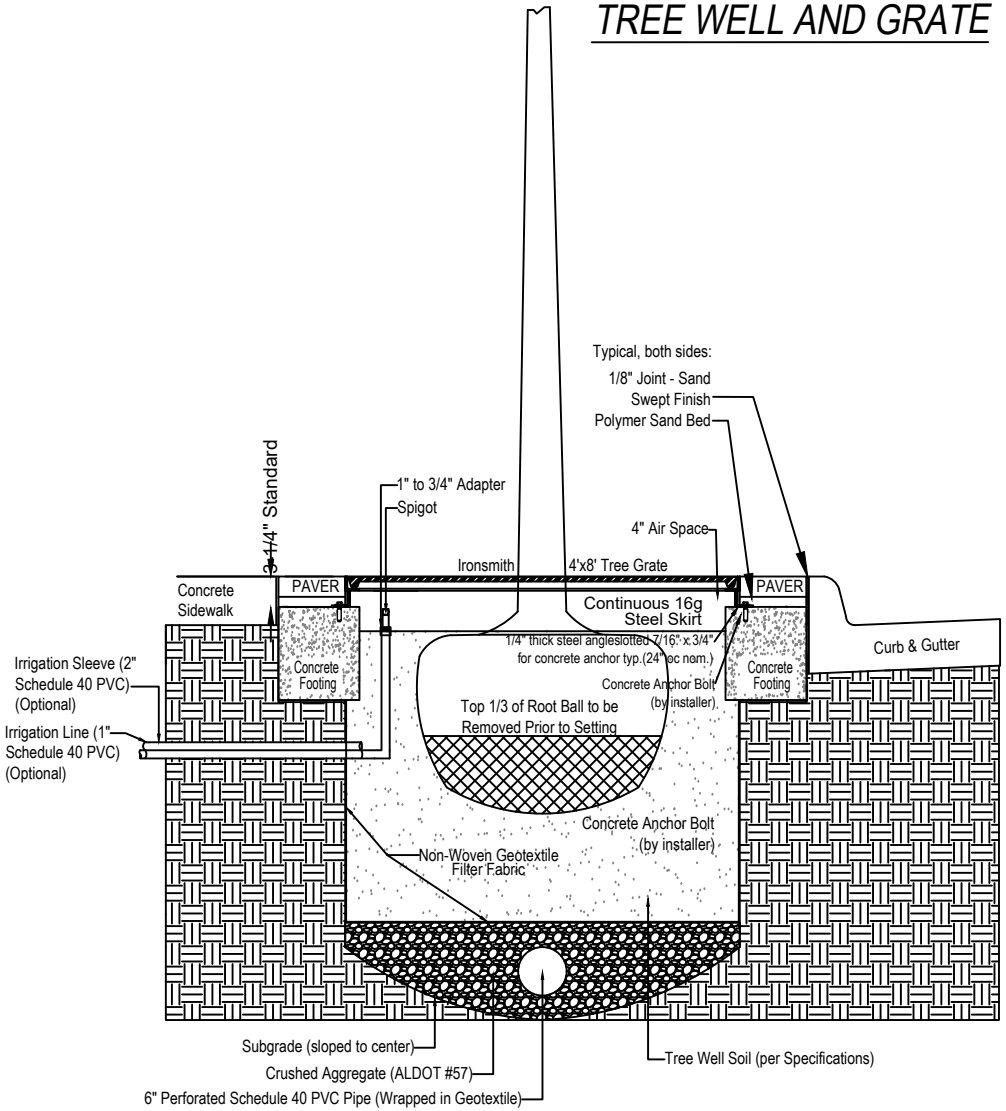


STANDARD DETAILS: STREETS	5.23

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
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IMPLEMENTED: 01-01-2022	

TREE WELL AND GRATE

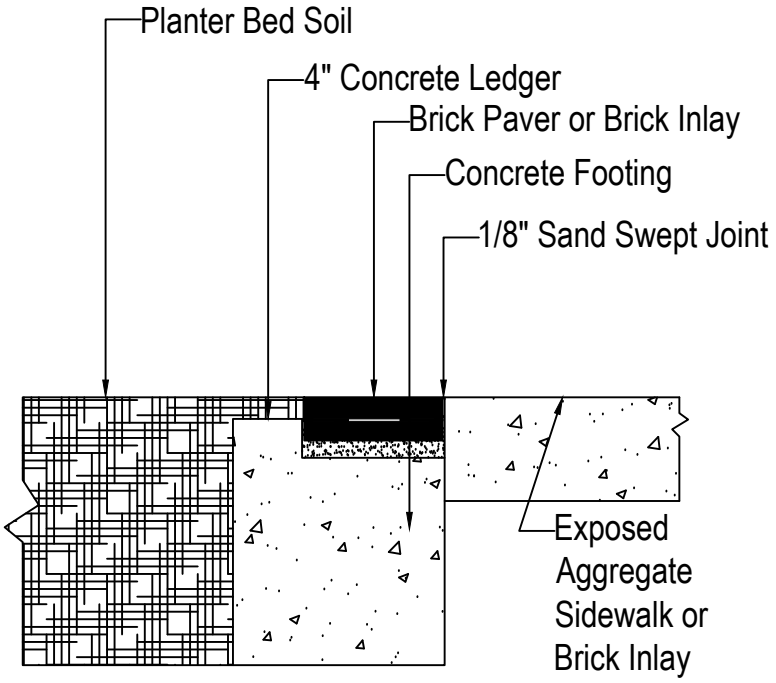


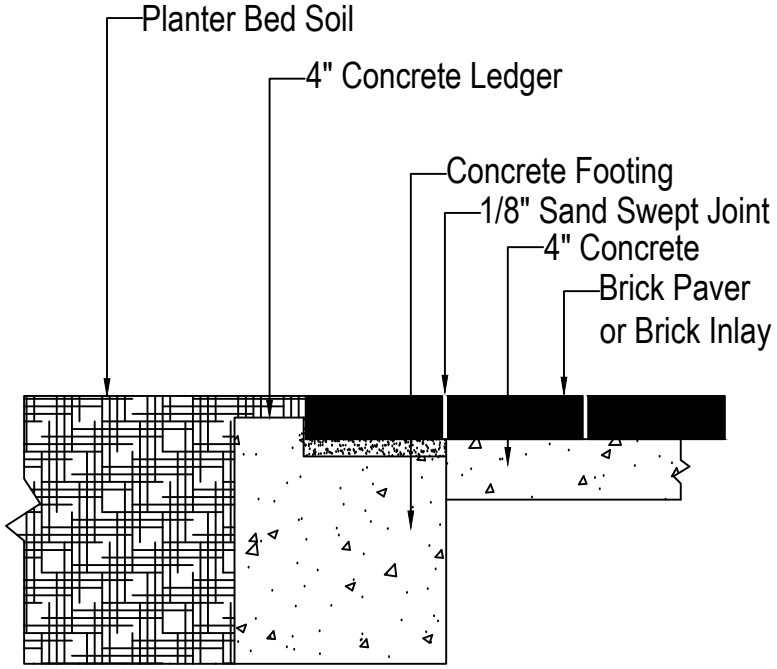
STANDARD DETAILS: STREETS	5.24

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

TREE WELL AND GRATE



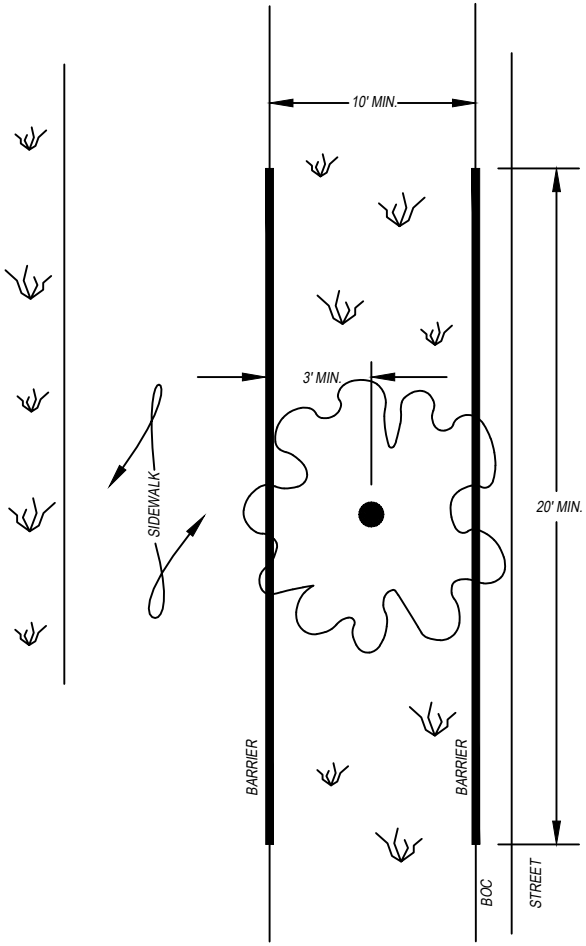


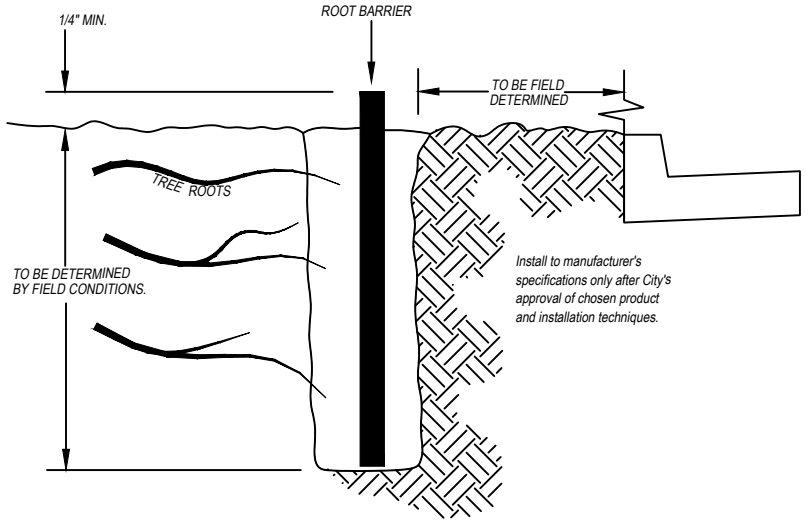
STANDARD DETAILS: STREETS	5.25

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

ROOT BARRIER





TREES MUST BE 10' MIN. FROM ALL POTABLE WATER / SANITARY SEWER FEATURES.

TREES MAY BE LOCATED 6' MIN FROM CURB INLETS WHEN BARRIER INSTALLED AT INLETS. OTHERWISE, SETBACK IS 10' MIN.

BARRIER TO BE INSTALLED AGAINST CURB / SIDEWALK / INLETS ACCORDING TO MANUFACTURER'S INSTRUCTION FOR THESE MIN. DISTANCES.

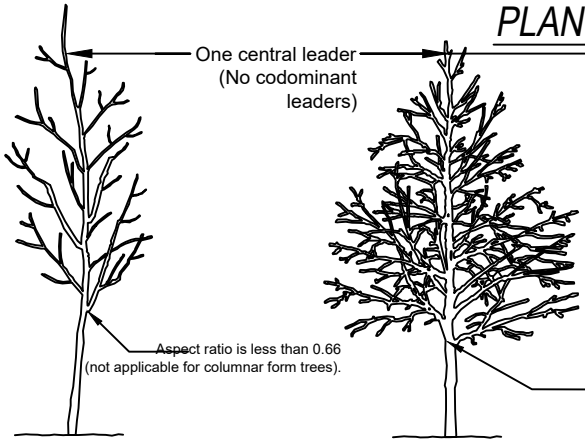
STANDARD DETAILS: STREETS	5.26

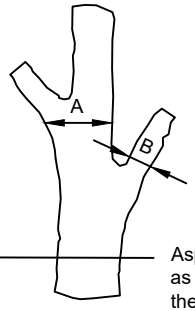
City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

PLANTINGS

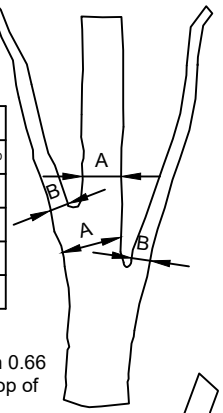
ACCEPTABLE



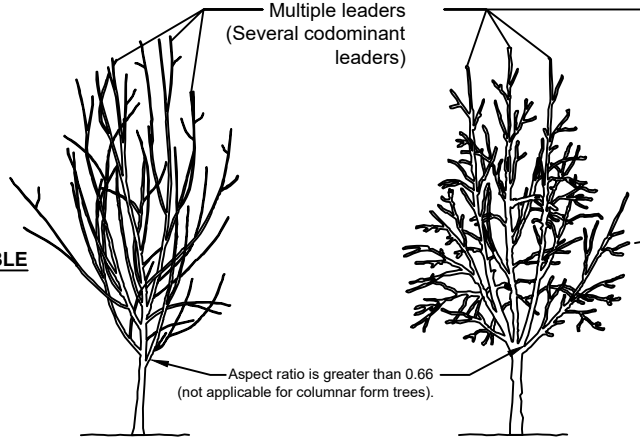


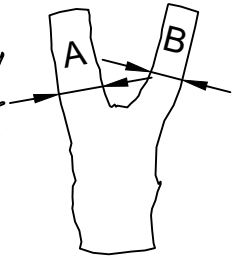
Example		
A	B	Aspect Ratio
1.50"	0.50"	0.33
2.50"	0.90"	0.36
2.0"	1.00"	0.50
2.50"	1.60"	0.64

Aspect ratio of B:A less than 0.66 as measured 1" above the top of the branch union.



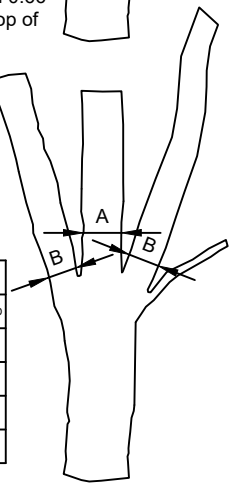
REJECTABLE





Example		
A	B	Aspect Ratio
2.50"	1.80"	0.72
2.0"	2.0"	1.0
2.50"	2.0"	0.80
4.0"	3.0"	0.75

Aspect ratio of B:A greater than or equal to 0.66 as measured 1" above the top of the branch union.



Notes:
1- Aspect ratio shall be less than 0.66 on all branch unions. Aspect ratio is the diameter of branch (B) divided by the diameter of the trunk (A) as measured 1" above the top of the branch union. This criterion is not applicable for columnar form trees.

2- Any tree not meeting the crown observations detail may be rejected.

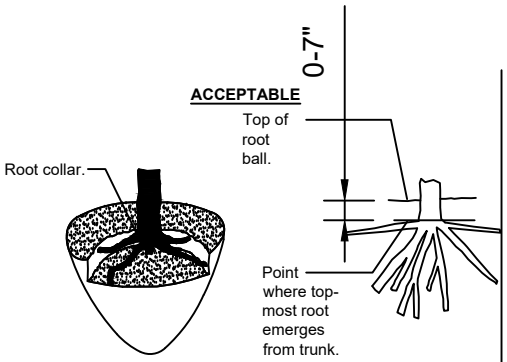
TREE ACCEPTANCE CRITERIA

ADAPTED FOR USE FROM:
URBAN TREE FOUNDATION © 2014

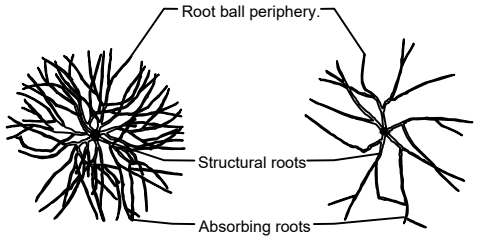
STANDARD DETAILS: STREETS	5.27
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

PLANTINGS

ACCEPTABLE

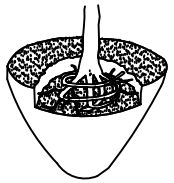


The point where top-most root(s) emerges from the trunk (root collar) should be within the top 2" of substrate. The root collar and the root ball interior should be free of defects including circling, kinked, ascending, and stem girdling roots. Structural roots shall reach the periphery near the top of the root ball.

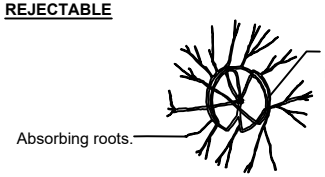


Roots radiate from trunk and reach side of root ball without defecting down or around.

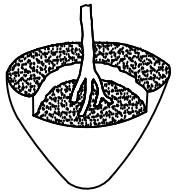
REJECTABLE



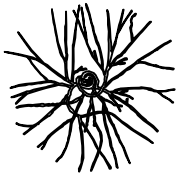
Structural roots circle interior of root ball. No structural roots are horizontal and reach the root ball periphery near the top of the root ball.



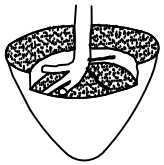
Only absorbing roots reach the periphery near the top of the root ball. Structural roots mostly wrap or are deflected on the root ball interior.



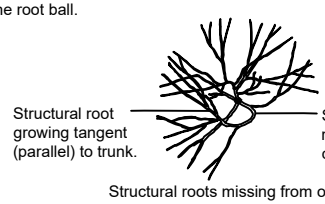
Structural roots descend into root ball interior. No structural roots are horizontal and reach the root ball periphery near the top of the root ball.



Structural roots circle and do not radiate from the trunk.



Structural roots primarily grow to one side.



Structural roots missing from one side, and/or grow tangent to trunk.

Notes:
1- Observations of roots shall occur prior to acceptance. Roots and soil may be removed during the observation process; substrate/soil shall be replaced after the observations have been completed.

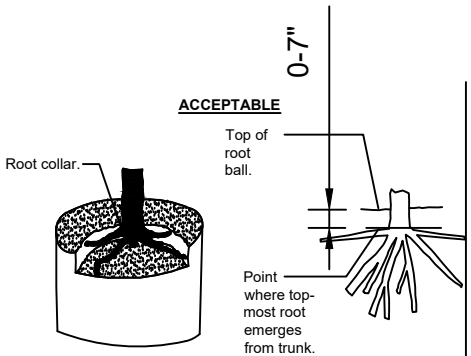
ROOT BALL CRITERIA - BALLED AND BURLAPPED

STANDARD DETAILS: STREETS	5.28
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

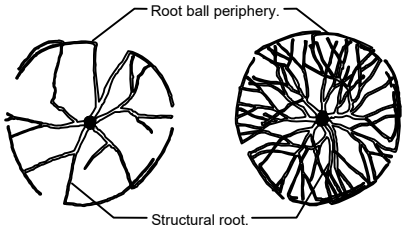
City of Auburn

PLANTINGS

ACCEPTABLE

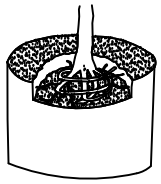


The point where top-most root(s) emerges from the trunk (root collar) should be within the top 2" of substrate. The root collar and the root ball interior should be free of defects including circling, kinked, ascending, and stem girdling roots. Structural roots shall reach the periphery near the top of the root ball.



Roots radiate from trunk and reach side of root ball without deflecting down or around.

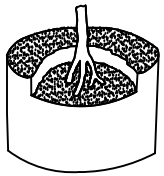
REJECTABLE



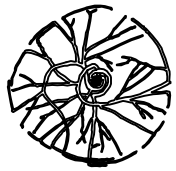
Structural roots circle interior of root ball. No structural roots are horizontal and reach the root ball periphery near the top of the root ball.



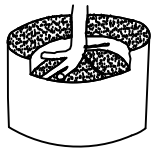
Only absorbing roots reach the periphery near the top of the root ball. Structural roots mostly wrap or are deflected on the root ball interior.



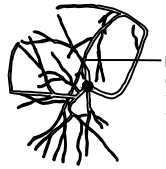
Structural roots descend into root ball interior. No structural roots are horizontal and reach the root ball periphery near the top of the root ball.



Structural roots circle and do not radiate from the trunk.



Structural roots primarily grow to one side.



Structural roots missing from one side, and/or grow tangent to trunk.

Notes:

1- Observations of roots shall occur prior to acceptance. Roots and substrate may be removed during the observation process; substrate/soil shall be replaced after observation has been completed.

2- Small roots (¼" or less) that grow around, up, or down the root ball periphery are considered a normal condition in container production and are acceptable however they should be eliminated at the time of planting. Roots on the periperhy can be removed at the time of planting. (See root ball shaving container detail).

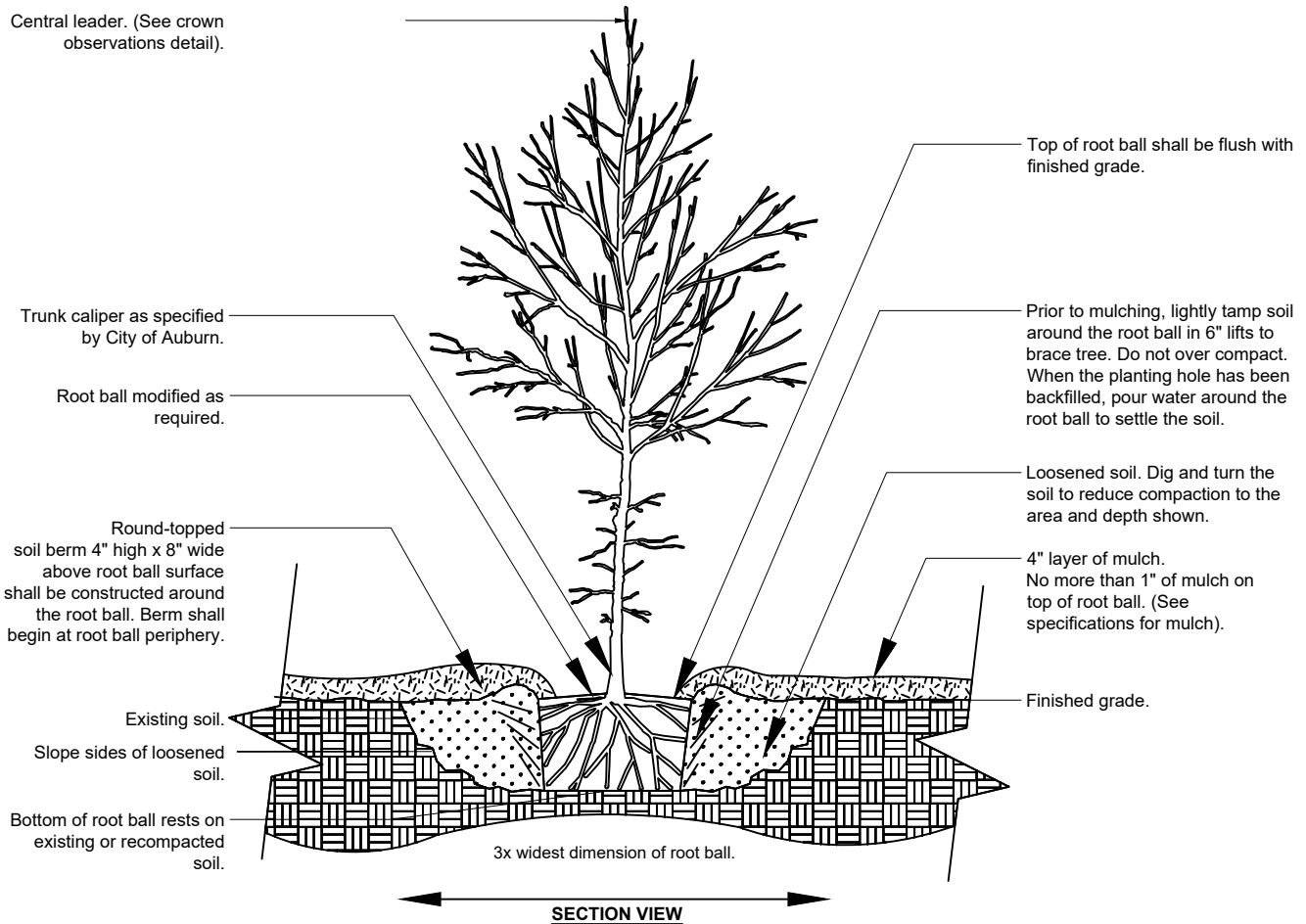
ROOT BALL CRITERIA - CONTAINERIZED

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STANDARD DETAILS: STREETS	5.29
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

City of Auburn

PLANTINGS



SECTION VIEW

TREE w/ BERM

Notes:

1- Trees shall be of quality prescribed in crown observations and root observations details and specifications.

2- See specifications for further requirements related to this detail.

STANDARD DETAILS: STREETS	5.30

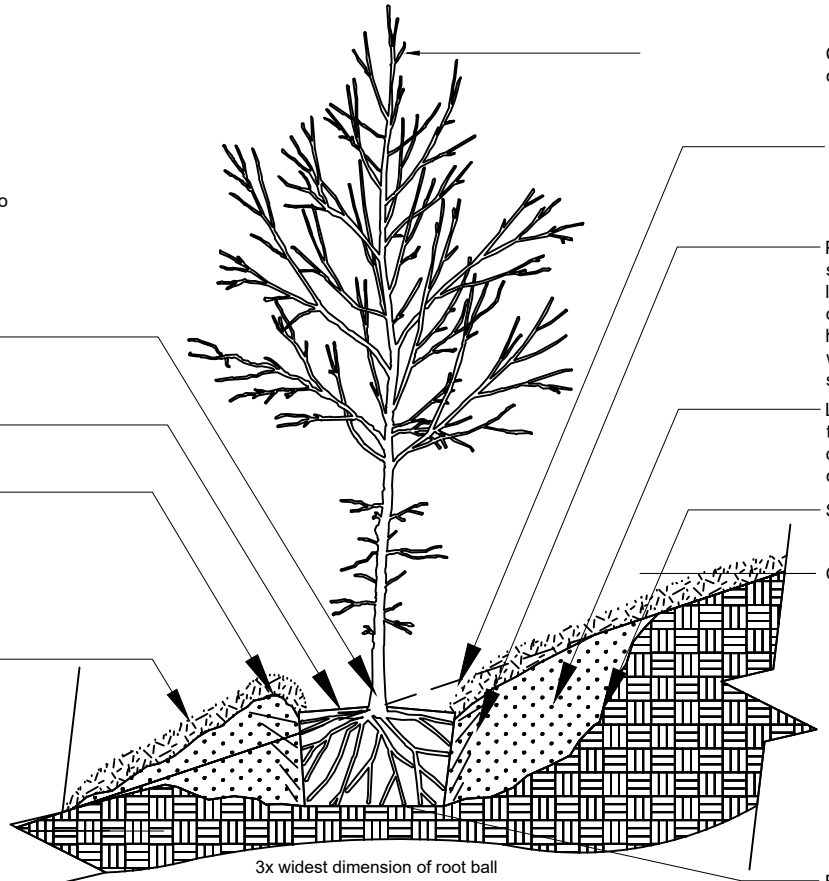
City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

PLANTINGS

Notes:
1- Trees shall be of quality prescribed in crown observations and root observations details and specifications.

2- See specifications for further requirements related to this detail.



SECTION VIEW

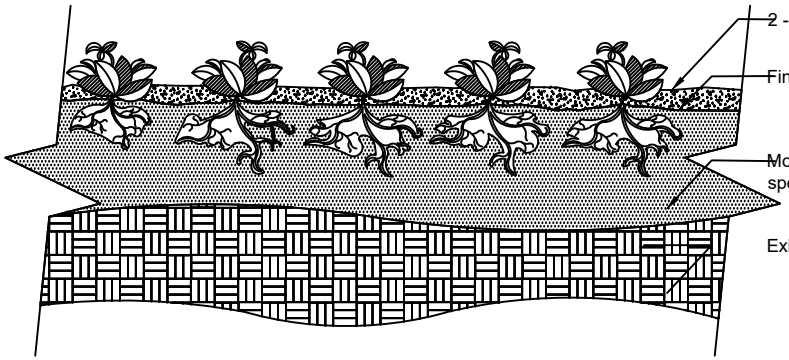
TREE ON SLOPE

ADAPTED FOR USE FROM:
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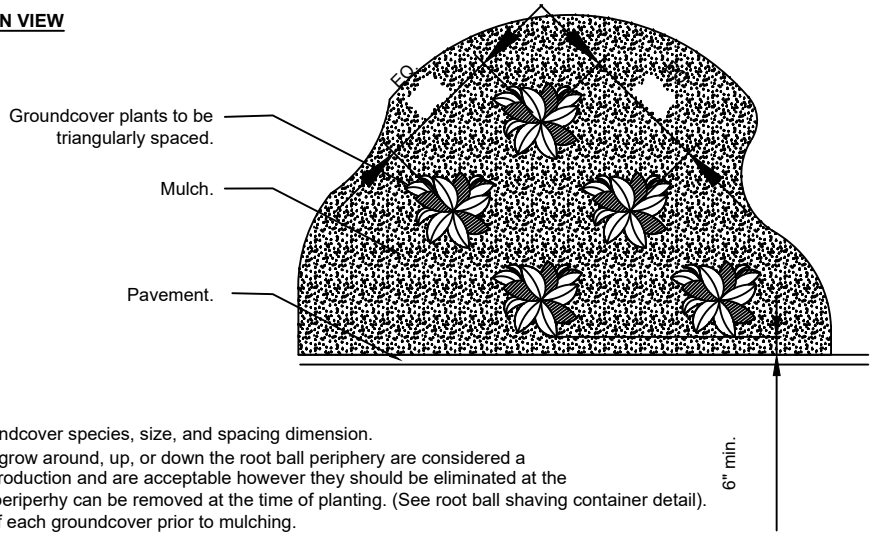
STANDARD DETAILS: STREETS	5.31
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

City of Auburn

PLANTINGS



SECTION VIEW



PLAN

Notes:
1- See planting legend for groundcover species, size, and spacing dimension.
2- Small roots (¼" or less) that grow around, up, or down the root ball periphery are considered a normal condition in container production and are acceptable however they should be eliminated at the time of planting. Roots on the periperhy can be removed at the time of planting. (See root ball shaving container detail).
3- Settle soil around root ball of each groundcover prior to mulching.

GROUNDCOVER

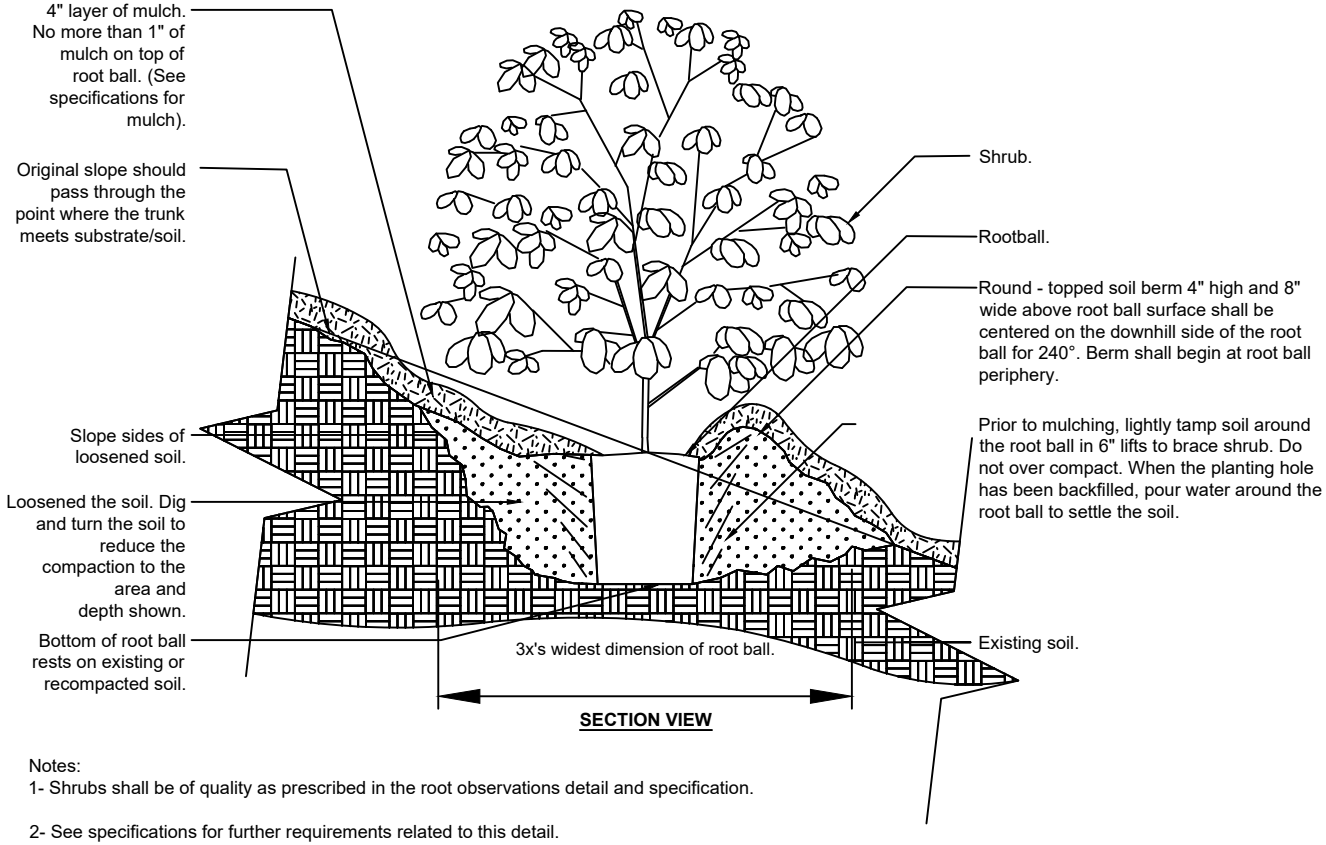
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STANDARD DETAILS: STREETS 5.32

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
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DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

PLANTINGS



SECTION VIEW

Notes:
1- Shrubs shall be of quality as prescribed in the root observations detail and specification.

2- See specifications for further requirements related to this detail.

SHRUB PLANTING ON SLOPE

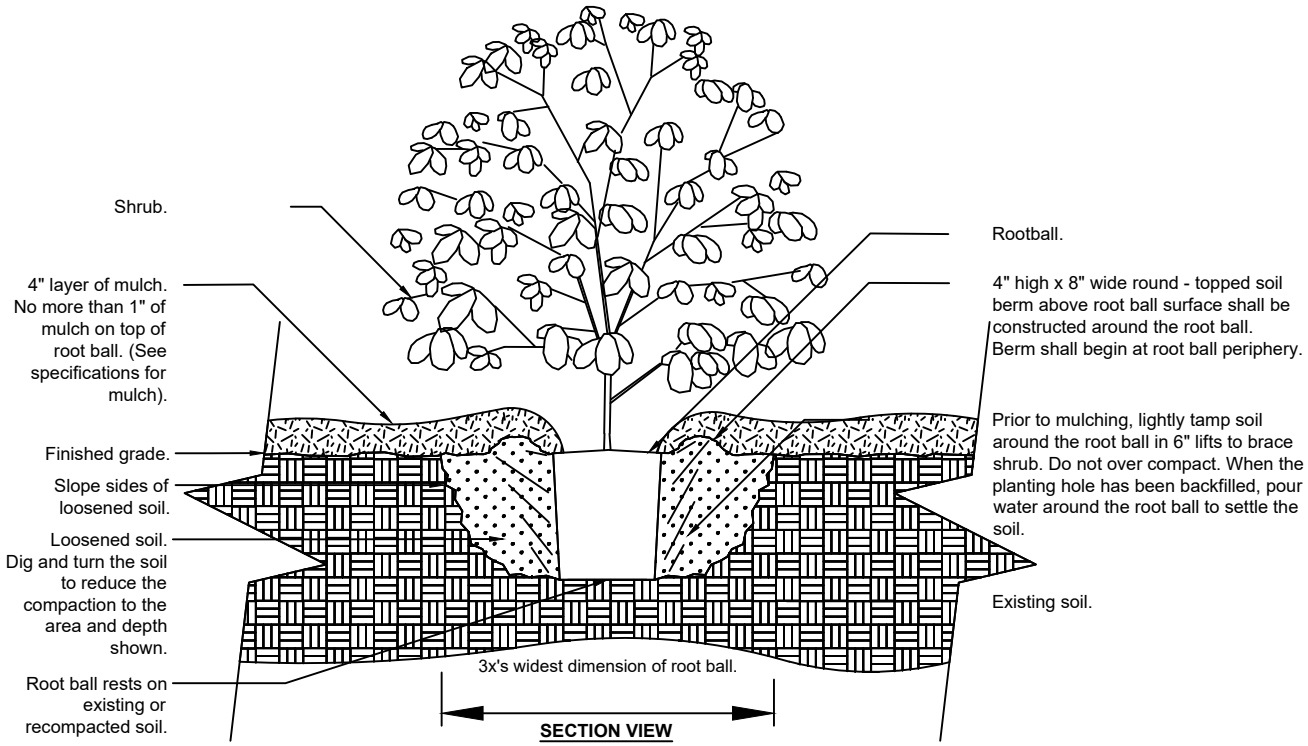
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URBAN TREE FOUNDATION © 2014

STANDARD DETAILS: STREETS	5.33

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

PLANTINGS



SECTION VIEW

Notes:
1- Shrubs shall be of quality prescribed in the root observations detail and specifications.

2- See specifications for further requirements related to this detail.

SHRUB PLANTING

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URBAN TREE FOUNDATION © 2014

STANDARD DETAILS: STREETS	5.34

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

Planting Guidelines

- *If a contractor is performing tree planting, they shall notify the City of Auburn Urban Forestry Specialist 24 hours in advance of the planting of any tree within the City's Right of Way.*
- *All planting locations within the public right of way shall be checked for underground conflicts.*
- *Remove container or top third of burlap and all ropes, wires, etc. from root ball.*
- *Dig planting holes 2-3 times as wide as the container. The depth of the planting pit shall be equal to the size of the rootball. Place the tree in the planting pit so the trunk flare or the top of the root ball is at least one-half inch to 1 inch (1/2" to 1") above finish grade. In grass covered parkways the top of the rootball shall be higher than the surrounding soil by one-half inch to one inch (1/2" to 1").*
- *When obtaining a tree from a nursery, always carry the tree by its container or rootball, never by the trunk.*
- *After removing the tree from the container, cut circling roots and matted roots off the bottom. Check for any circling roots missed during initial inspection.*
- *Before placing the tree in the planting pit, examine the root ball for injured roots and the canopy for broken branches. Damaged roots shall be cleanly cut off at a point just in front of the break. Broken branches shall be cut out of the canopy making sure that the branch collar is not damaged.*
- *Backfill with soil removed from the planting hole, or as required for structural cells or structural soils. Only add fertilizer or compost if soil analysis indicates it is required. Build a temporary four to six inches (4" to 6") water retention berm around the root ball to allow for establishment watering. Immediately after planting the tree, water it thoroughly by filling the water retention basin twice.*
- *Eliminate all air pockets while backfilling the planting pit by watering the soil as it is put into the hole. Do not compact the backfill by tamping it down.*
- *All staking, wrapping, and other material should be removed from the tree trunk, root ball, and canopy at planting. No staking of trees shall be permitted unless approved by the City of Auburn Urban Forestry Specialist or a representative thereof. Approved staking must be removed after one year.*
- *Mulch with a two to four inch (2" to 4") layer to conserve soil moisture, provide protection from extreme temperatures and prevent damage from weed eaters. Mulch shall be kept three to four inches (3" to 4") away from the tree trunk and shall extend at minimum to the boundary of the water retention basin. It may extend further if desired.*
- *Install tree bags or donuts at planting to provide supplementary water during the first year. The soil around the new tree shall be kept moist, but not saturated, by watering at least once a week when adequate rainfall is not received.*
- *Substitution of plant species, sizes, or other specifications will not be allowed without prior approval of the City of Auburn Landscape and Sustainability Division Manager or a representative thereof.*

Soil Requirements

The following options are suitable for planting trees in the City of Auburn Right of Way. These specifications apply to normal conditions. Alterations for utility conflicts, slopes, or drainage may be approved by the Urban Forestry Specialist a representative thereof. For the purpose of this document, understory trees are defined as less than 30' mature height, midstory trees are defined as 30' - 50' mature height, and overstory trees are defined as 50' or greater mature height.

Planting type	Soil volume			Soil depth	Soil requirements
	Understory	**Midstory**	**Overstory**		
Buffer strip	400	800	1000	36" minimum	May use soil removed from the planting hole amended as necessary amended as necessary according to soil test
Structural cells	400	800	1000	No minimum 10" - 43" depth available depending on product	Native topsoil amended as necessary according to soil test
Structural soil	1600	3200	4000	36" Minimum	Non-proprietary or patented products may be used according to system specification

Soil testing requirements

All soils must be submitted for testing to determine texture and pH and results provided at Least four weeks prior to scheduled installation. Native topsoil must be classified as a sandy loam with a pH between 5 and 7. If tests fail to meet specifications, the Urban Forestry Specialist or representative thereof may require amendments before it is accepted. All soil testing will be at the expense of the contractor.

Structural cells

Structural cells may include Silva Cell by Deep Root Partners, StrattaCell by CityGreen, or approved equal. At least four weeks prior to installation, the contractor shall submit manufacturer's literature to the Urban Forestry Specialist. Installation of the structural cells shallfully comply with all requirements of the manufacturer and/or licensed supplier.

STANDARD DETAILS: STREETS	5.35
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	03-01-2024
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

APPENDIX P. Request for Installation of Traffic Signs

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Engineering Services Department
Traffic Engineering Division
161 North Ross Street
Auburn, AL 36830

REQUEST FOR INSTALLATION OF TRAFFIC SIGNS

Please complete the following information:

Development Name: _____

Contact: _____ Daytime Phone: _____

Address: _____

Email (optional): _____

Fill in number of signs requested:

☐ Stop Sign (A) ☐ Yield Sign (B) ☐ Speed Limit _____ mph (C1)

☐ Dead End (D) ☐ No Outlet (E) ☐ Speed Limit _____ mph (C2)

☐ Other (F): _____ ☐ Other (G): _____

Street Name Signs: ***Attach additional sheets if necessary.***

	North/South Street	East/West Street	
☐	_____	_____	(H1)
☐	_____	_____	(H2)
☐	_____	_____	(H3)
☐	_____	_____	(H4)
☐	_____	_____	(H5)
☐	_____	_____	(H6)

Provide a map with the approximate locations of requested signs, labeled as "A" for Stop Signs, "B" for Yield Signs, etc. The Traffic Engineering Division of the Engineering Services Department will perform any necessary data collection and analysis to assess the need for the installation of a requested traffic sign. All signs shall be installed in accordance with the Manual on Uniform Traffic Control Devices, latest edition.

Signature: _____ **Date:** _____

This section for official use only

Evaluation	**Determination**	**By/Date**
Planning Commission approved name		
Speed limits		
In accordance with MUTCD		
Cost Estimate		
Recommendation		

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APPENDIX P-1. Irrigation Policy

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City of Auburn

Irrigation Policy

Effective January 1, 2013

Purpose: The purpose of this policy is to protect the use of public rights of way for their intended purposes and to repair and replace utilities located in public right of way at the lowest cost to the City of Auburn.

Background: The City of Auburn allows encroachments upon public right of way provided that such uses have been permitted and do not diminish the City's rights to use the public right of way for maintenance, repair, or expansion of infrastructure. Often private property owners install, construct, or cause to be constructed irrigation systems and landscaping within the right of way that can be affected by expanding the infrastructure. All of these actions have increased the costs to the City when performing maintenance, repair, or expansion of the infrastructure.

Policy:

1. To reduce the costs to City projects, the City shall not restore nor pay any restoration or replacement costs for any encroachment on public right of way, except as outlined in below.
2. Any work within existing street right of way will require an encroachment agreement and/or hold harmless agreement.
3. All trees planted within right of way, 10 feet from any paved surface, will include City approved root barriers.
4. It is understood that irrigation systems placed on City of Auburn right of way are placed there at the risk of the property owner and may be removed with notice to the owners without compensation or replacement.

In the case where the City allows irrigation within the City of Auburn right of way, the following shall apply:

1. A permit is required to be obtained from the Inspection Services Department.
2. The system should be installed per the standard details outlined in the Engineering Design and Construction Manual.
3. No major irrigation equipment, such as backflow, controller, remote control valves or mainlines shall be located within the right of way. Lateral line, emitter and distribution tubing may be located within the right of way, but should be as close to the property line as possible.

4. Heads and pipe type shall be of a common type such that replacement is easily accommodated.
5. A hold harmless/indemnity agreement, and certification that if the city needs the right of way to expand infrastructure, the irrigation system and appurtenances will be removed as part of the construction. The homeowner understands that the City or its assigns has the right to remove the obstruction to accommodate the infrastructure expansion. The City will not replace irrigation or landscaping that had been placed on the right of way without prior approval by the Engineering Services Department.

Please contact the Engineering Services Department at (334) 501-7390 or www.auburnalabama.org/engineering-services/ for questions concerning this policy.

APPENDIX P-2. Decorative Street Signs Policy

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City of Auburn

Decorative Street Signs Policy

(This policy is to be used in conjunction with the Engineering Design and Construction Manual Section 5.7 Signing and Permanent Markings)

Purpose

This policy document sets out formal policy and guidelines for developers and homeowners associations on the requirements for maintenance of decorative street name signs.

Background

The Traffic Engineering Division of the Engineering Services Department receives many requests each year to provide street name signs and regulatory signs within the City. The City of Auburn standard street name sign is reflective navy blue background with reflective white lettering. A one time charge of $125.00 per intersection is billed to the developer upon installation of City standard street name signs. Many developers request the use of decorative signs and posts that are unique to their subdivision.

Policy

The City of Auburn will not be responsible for replacement of decorative signs and posts. If a decorative sign or post is damaged it is the responsibility of the developer or homeowners association to replace and/or repair the sign within 7 days of being notified by the Engineering Services Department Administration Division of the deficiency by mail and/or email. If requested by the developer or homeowners association, the City of Auburn will install a temporary replacement sign until a new sign can be obtained. Upon installation of the new decorative sign, the temporary signs and posts should be returned to the City of Auburn. If the sign is not returned, the developer or homeowners association will be charged $125.00 for the temporary sign.

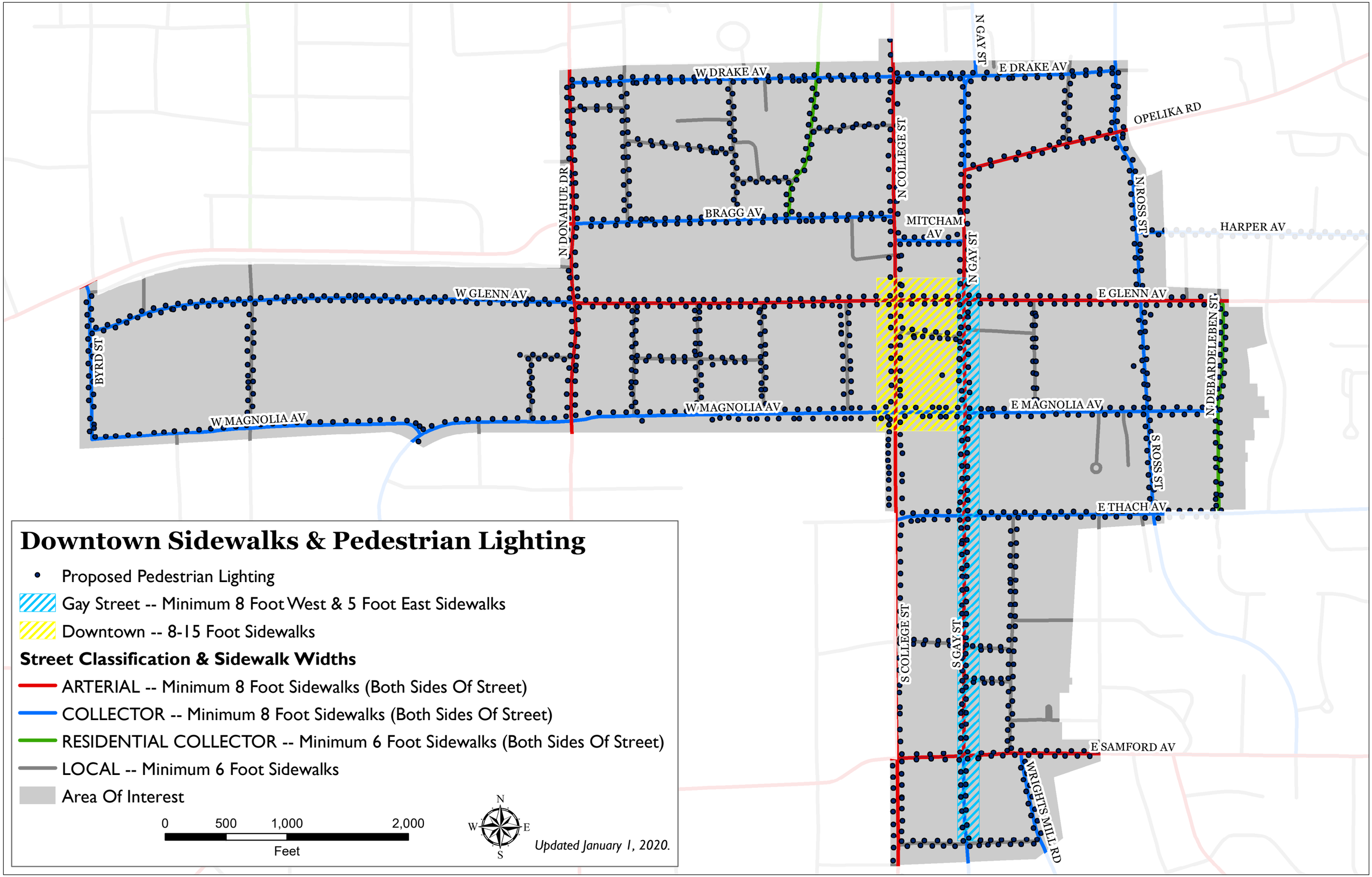
If the sign has not been repaired or replaced within 7 days and a temporary sign not requested, the Administrative Division will advise the Sign Technician to install a standard COA sign. The Sign Technician will follow up one month after installation of a temporary sign to see if the developer or homeowners association has taken any action. If the temporary sign has been replaced with a decorative sign and the temporary sign has not been returned to the City, the homeowners association will be charged for the temporary sign.

Note: Stop signs will require a COA sign be installed immediately for the safety of the public.

Contact the City of Auburn's Traffic Engineering Division at (334) 501-7390 or email us at webengineering@auburnalabama.org for questions concerning this policy.

APPENDIX P-3. Downtown Sidewalks and Pedestrian Lighting Map

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Downtown Sidewalks & Pedestrian Lighting

- Proposed Pedestrian Lighting
- Gay Street -- Minimum 8 Foot West & 5 Foot East Sidewalks
- Downtown -- 8-15 Foot Sidewalks

Street Classification & Sidewalk Widths

- ARTERIAL -- Minimum 8 Foot Sidewalks (Both Sides Of Street)
- COLLECTOR -- Minimum 8 Foot Sidewalks (Both Sides Of Street)
- RESIDENTIAL COLLECTOR -- Minimum 6 Foot Sidewalks (Both Sides Of Street)
- LOCAL -- Minimum 6 Foot Sidewalks
- Area Of Interest

0 500 1,000 2,000

Feet

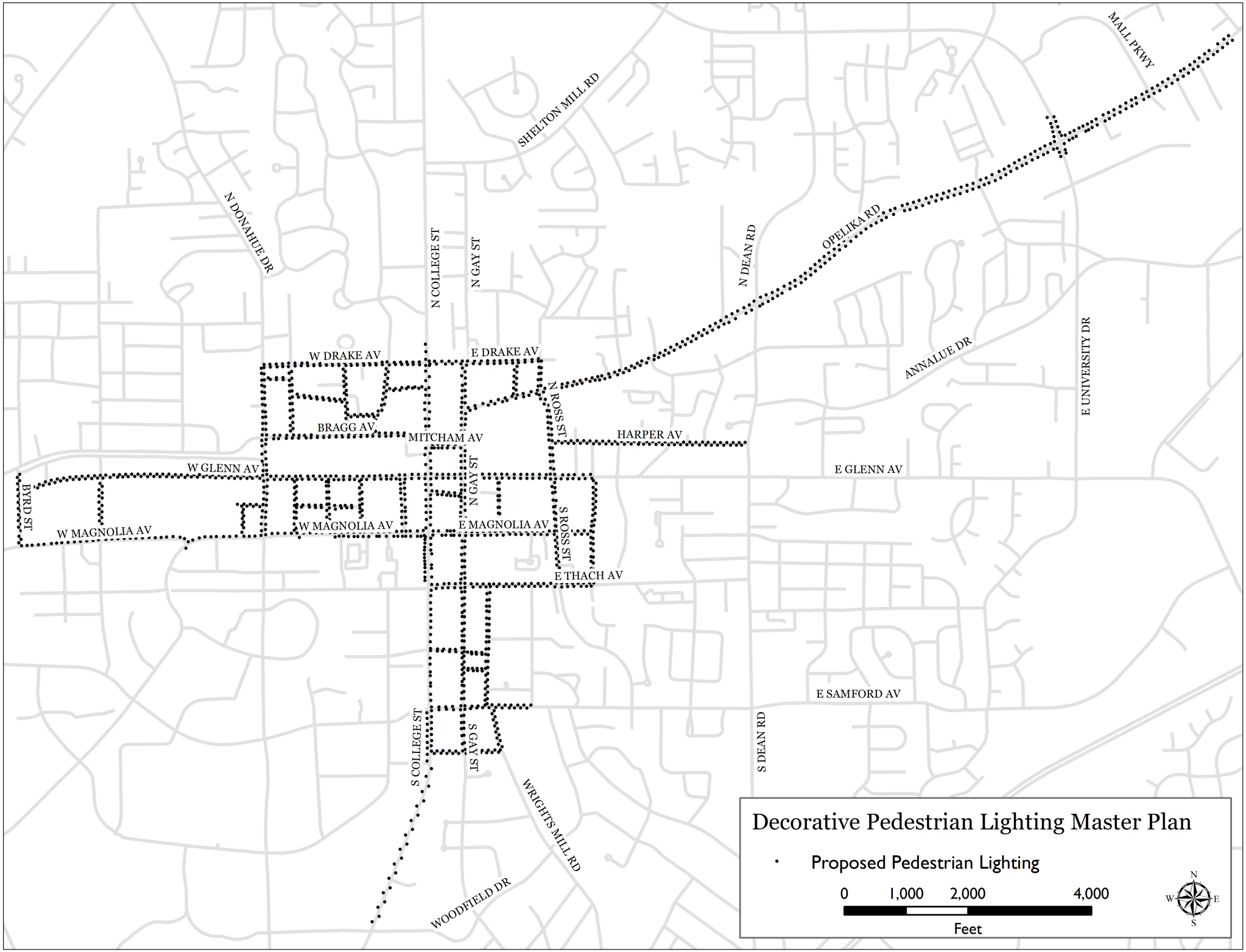
N W E S

Updated January 1, 2020.

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APPENDIX P-4. Decorative Pedestrian Lighting Master Plan

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MALL PKWY
SHELTON MILL RD
N DONAHUE DR
N COLLEGE ST
N GAY ST
N DEAN RD
OPELIKA RD
ANNALUE DR
E UNIVERSITY DR
W DRAKE AV
E DRAKE AV
N ROSS ST
BRAGG AV
MITCHAM AV
HARPER AV
W GLENN AV
E GLENN AV
BYRD ST
W MAGNOLIA AV
W MAGNOLIA AV
E MAGNOLIA AV
S ROSS ST
E THACH AV
E SAMFORD AV
S COLLEGE ST
S GAY ST
S DEAN RD
WRIGHTS MILL RD
WOODFIELD DR
Decorative Pedestrian Lighting Master Plan
Proposed Pedestrian Lighting
0
1,000
2,000
4,000
Feet
N
W
E
S

APPENDIX Q. Visual Inspection Checklist

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VISUAL INSPECTION CHECKLIST

CITY OF AUBURN
ENGINEERING SERVICES DEPARTMENT

INSPECTION YEAR:

TYPE OF INSPECTION: (**Informal, Regular, Formal**):

DAM NAME:

DAM INVENTORY NO:

LOCATION: __ ¼ of the __ ¼, Section ___, Township____, Range ____, Lee County

OWNER:

OPERATOR:

DATE OF INSPECTION:

RESERVOIR INFORMATION

Normal Reservoir Elevation (ft):

Reservoir Elevation at time of inspection (ft):

WEATHER CONDITIONS **(including recent rainfall):**

INSPECTION PERSONNEL

Alabama Licensed Professional Engineer(s):

Name Affiliation Area of Expertise

Non-Licensed technical expert(s) and advisors(s):

Name Affiliation Area of Expertise

City Representative(s):

Name **Affiliation**

Dam Owner Representative(s):

Name **Affiliation**

Others:

Name **Affiliation**

GENERAL INFORMATION

Name of Dam:

River Basin:

Stream Name: **Tributary of:**

Latitude (N): **Longitude (W):**

Purpose of Dam:

Hazard Classification: **Drainage Area (sq. mi.):**

Height of Dam (ft): **Length (ft):**

Normal Surface (ac): **Normal Capacity (ac-ft):**

Maximum Surface (ac): **Maximum Capacity (ac-ft):**

Principal Spillway Capacity (cfs): **Emergency Spillway Capacity (cfs):**

Are the spillway(s) adequate for this classification of dam?

Principal: Yes No

Emergency: Yes No

If not, what percent of the PMP can be passed?

Principal: %

Emergency: %

HISTORY

Date Constructed: **Date(s) Reconstructed:**

Designer: **Constructed by:**

Owner & Address:

Owner Telephone Number:

Owner/Operator present during inspection (yes or no):

PREVIOUS INSPECTIONS **(date of)**

Last Informal Inspection: **Last Regular Inspection:**

Last Formal Inspection:

EMERGENCY ACTION PLAN **(Required for all High and Specified Significant dams)**

Date of Approved Plan:

Date of Plan Revision:

Is the notification flowchart complete and current?

Is inundation mapping included?

Are emergency materials and equipment identified?

When was the plan last tested?

DOWNSTREAM HAZARD CLASSIFICATIONS

Present Hazard Classification:

Changes in Downstream Land Use and Habitation since last inspection:

Is present Classification appropriate?

OPERATION AND MAINTENANCE

Date of Operation and Maintenance Plan:

Are instructions adequate?

Do operating personnel follow instructions?

What are operating personnel capabilities?

EXAMINATION OF EMBANKMENT DAMS

DESCRIPTION OF STRUCTURE

Embankment Material:

Cutoff Type (If Known):

Impervious Core (If Known):

Internal Drainage System:

Movement (Horizontal and Vertical Alignment):

Junctions with Abutments or Embankments:

Miscellaneous:

CREST

Width of Crest:

Erosion on Crest Present:

Surface Cracks:

Settlement:

Unusual Conditions:

UPSTREAM SLOPE

Slope (Estimate) (H:V):

Trees, Undesirable Growth or Debris, Animal Burrows):

Sloughing, Subsidence or Depressions:

Slope Protection:

Unusual Conditions:

DOWNSTREAM SLOPE

Slope (Estimate) (H:V):

Trees, Undesirable Growth or Debris, Animal Burrows):

Sloughing, Subsidence or Depressions:

Surface Cracks or Movement at Toe:

Seepage:

External Drainage System (Ditches, Trenches, Blankets):

Condition Around Outlet Structure:

Unusual Conditions:

GROIN AND TOE AREA

Erosion around Groin Area:

Seepage at Groin Area:

Signs of Movement:

Depressions, Sinkholes:

Unusual Conditions:

SEEPAGE AND TOE DRAIN/RELIEF WELL FLOW SUMMATION

Location	**Estimated Flow**	**Color (Turbidity)**

EXAMINATION OF SPILLWAYS AND OUTLET WORKS

TYPE(S) AND DESRICPTION OF SPILLWAY(S)

Principal:

Emergency:

Other:

FOR EACH SPILLWAY THE FOLLOWING ASPECTS MUST BE EXAMINED WHERE APPROPRIATE

ENTRANCE CHANNEL

Description:

Vegetation (Trees, Bushes):

Debris:

Channel Side-Slope Stability:

Slope Protection/Erosion:

Unusual Conditions:

SPILLWAY CREST

Description:

Condition of Material:

Signs of Movement:

Joints:

Unusual Conditions:

INLET RISER

Description:

Condition of Material:

Signs of Movement:

Joints:

Floor:

Unusual Conditions:

SPILLWAY WING WALLS

Description:

Condition of Material:

Signs of Movement:

Joints:

Drains:

Unusual Conditions:

DOWNSTREAM APRON

Description:

Condition of Material:

Signs of Movement:

Unusual Conditions:

CONDUITS

Description:

Condition of Material:

Signs of Movement:

Joints:

Seepage:

Location **Estimated Flow** **Turbidity**

Unusual Conditions:

TRASH RACKS

Description:

Condition of Material:

Unusual Conditions:

CHUTES

Description:

Condition of Material:

Signs of Movement:

Joints:

Unusual Conditions:

STILLING BASIN

Description:

Condition of Material:

Signs of Movement:

Erosion:

Unusual Conditions:

OUTLET CHANNEL

Vegetation (Trees, Bushes):

Debris:

Channel Side-Slope Stability:

Erosion:

Unusual Conditions:

LOW LEVEL OUTLET

Description:

Condition:

Trash Rack:

Leakage:

Location **Estimated Flow**

Unusual Conditions:

Was the low-level outlet operated during the inspection?

Were there difficulties operating the low-level outlet?

When was the low-level outlet last operated and did this conform with the Operation and Maintenance Procedures?

Miscellaneous:

EMERGENCY SPILLWAY

Description:

Vegetation (Trees, Bushes):

Debris:

Channel Side-Slope Stability:

Slope Protection/Erosion:

Unusual Conditions:

OTHER SPILLWAY

Description:

Vegetation (Trees, Bushes):

Debris:

Channel Side-Slope Stability:

Slope Protection/Erosion:

Unusual Conditions:

EXAMINATION OF OTHER FEATURES

INSTRUMENTATION (Monumentation/Surveys, Observation Wells, Weirs, Piezometers, Etc.) location, condition:

(A separate report including instrument readings, condition of instruments, observations, and conclusions based upon the collected data should be attached.)

RESERVOIR

Slopes:

Sedimentation:

Unusual Conditions Which Affect Dam:

Unusual Conditions:

APPURTENANT STRUCTURES (Power House, Gatehouse, Penstocks, Water Supply, Other)

Description and Condition of each:

CONCLUSIONS

I certify that the above dam was personally inspected by me and the conditions described herein are correct to the best of my knowledge and belief.

I recommend the following repairs be made immediately:

The following long-term improvements should also be undertaken:

The following studies should also be undertaken:

Have the recommendations above included those from previous Regular or Formal Inspections?

Does the Emergency Action Plan or the Operation and Maintenance Procedures require revision?

Name of Professional Engineering Company/Consultant Representing the Owner:

Company/Consultant Address:

Company/Consultant Telephone Number:

Alabama Licensed Professional Engineer representing the dam owner in responsible charge of the inspection:

Sign_____ Date_____

Alabama Professional Engineer License Number_____

SEAL

(Department use only)

Dam Name_____

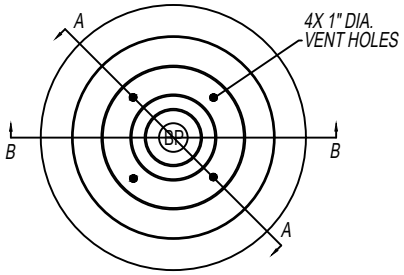
Reference No._____ Hazard Classification: ____

APPENDIX R. Storm Sewer Details and Standard Drawings

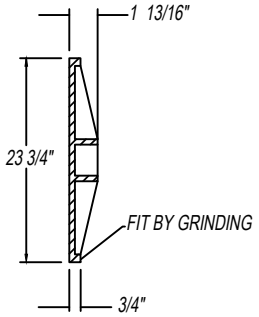
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CAST IRON RING AND COVER DETAIL

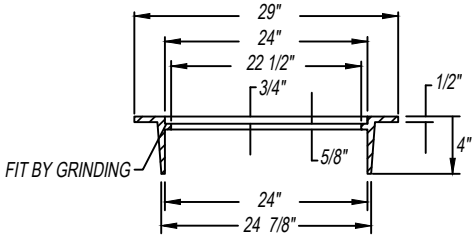
APPROVED FOR NON TRAFFIC



COVER FACE

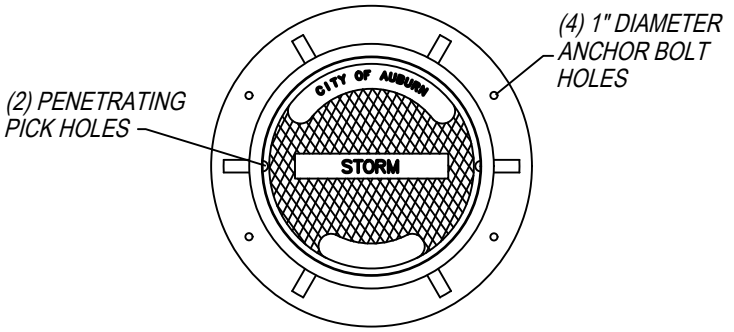


SECTION A - A

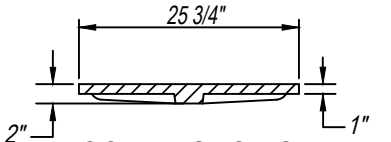


SECTION B - B

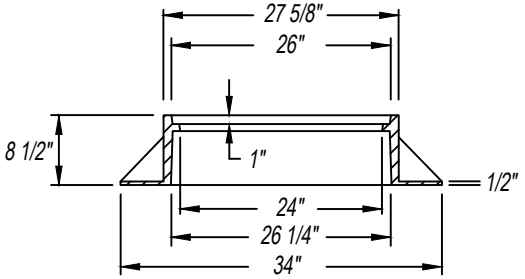
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COVER FACE



COVER SECTION



FRAME SECTION

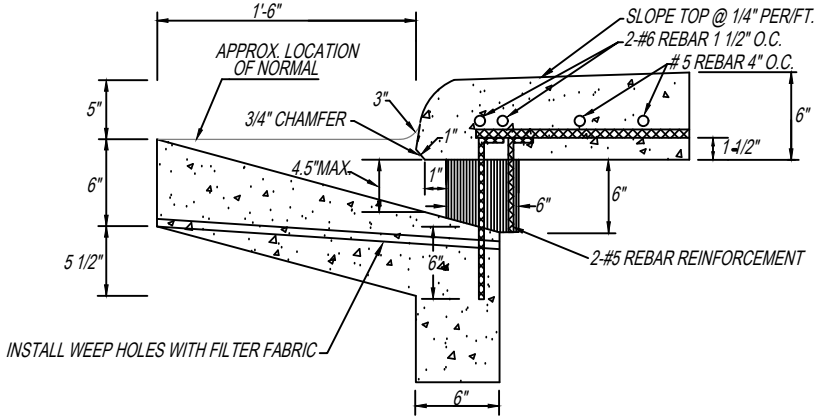
STANDARD DETAILS: STORM	7.00

City of Auburn

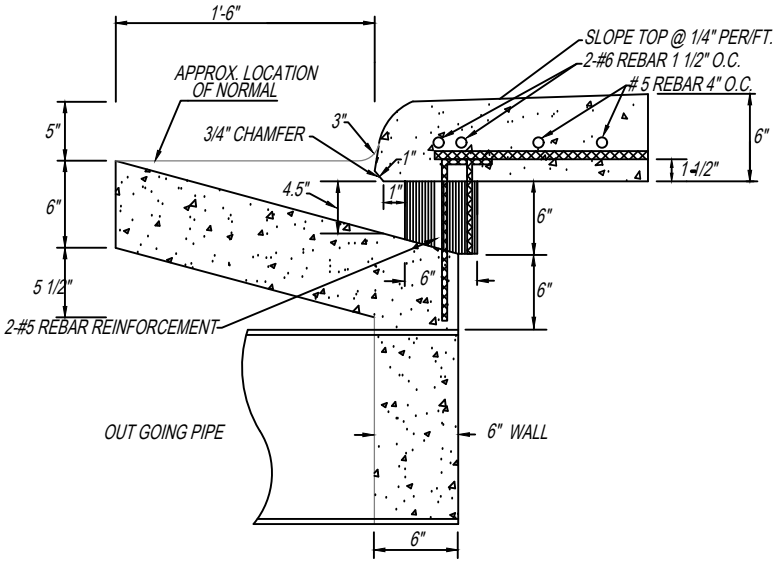
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

DEPRESSED GUTTER DETAIL

DEPRESSED GUTTER DETAIL #1



DEPRESSED GUTTER DETAIL #2

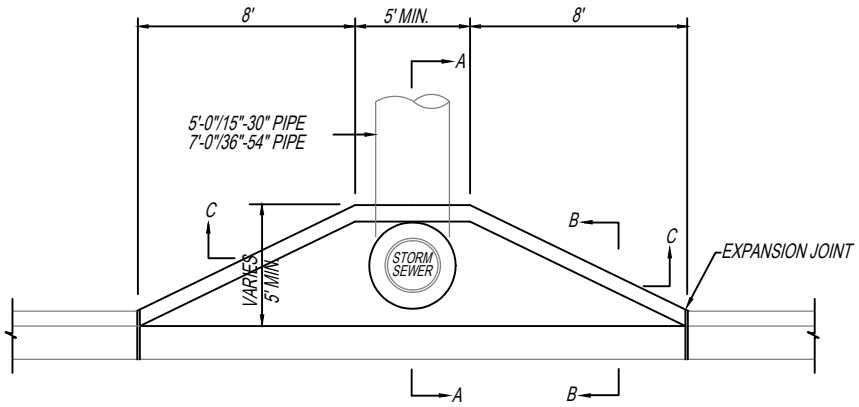


STANDARD DETAILS: STORM	7.01

City of Auburn

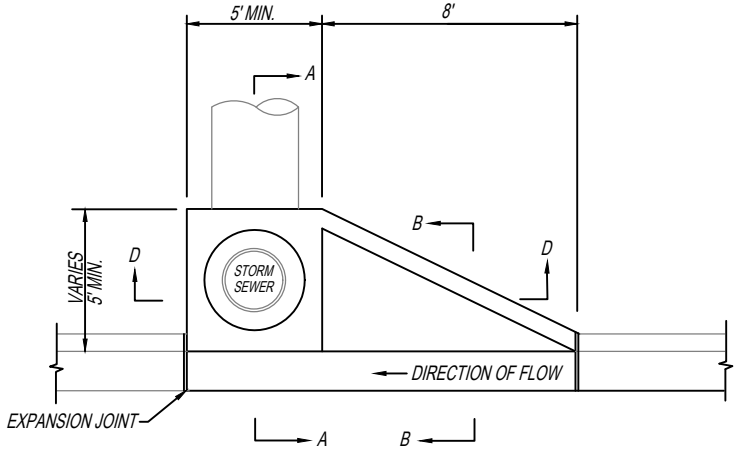
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SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

DOUBLE WING INLET

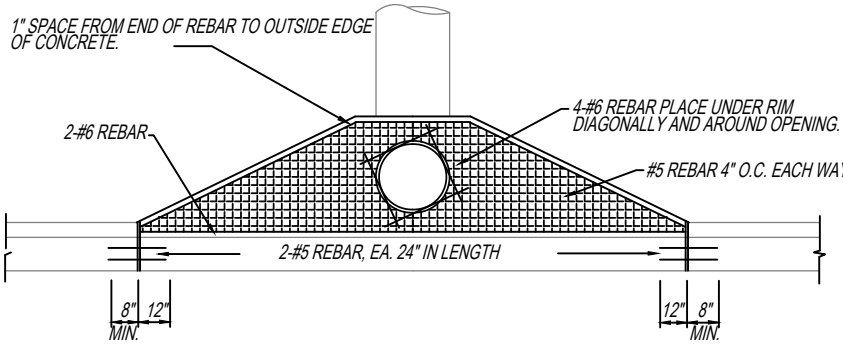


DOUBLE WING INLET PLAN

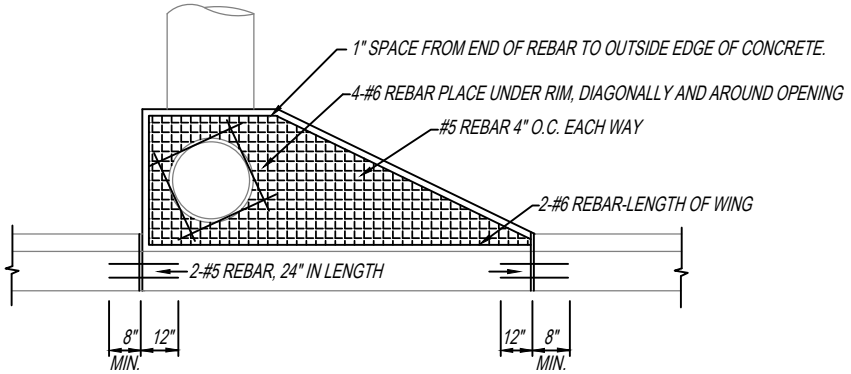
SINGLE WING INLET



SINGLE WING INLET PLAN



DOUBLE WING INLET TOP SECTION



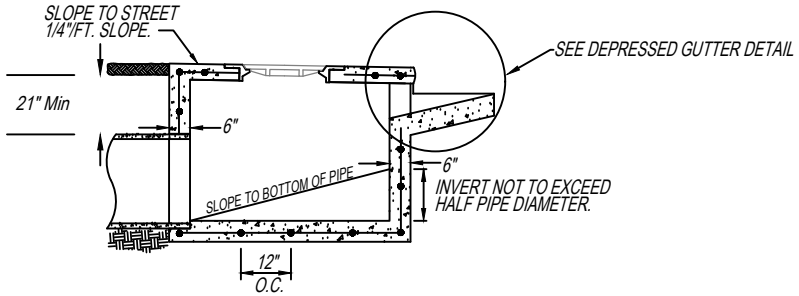
SINGLE WING TOP SECTION

STANDARD DETAILS: STORM	7.02

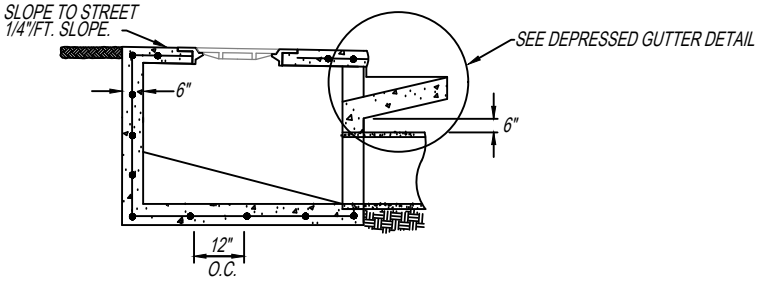
City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

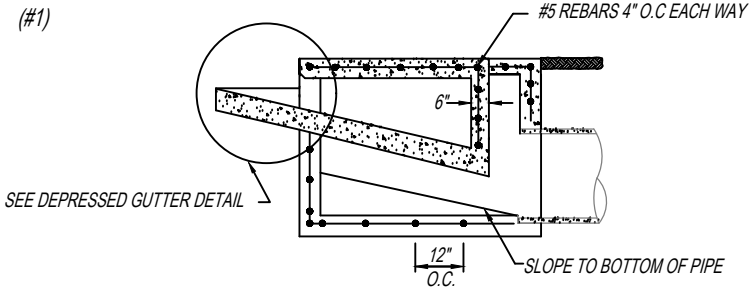
INLET BOX DETAIL



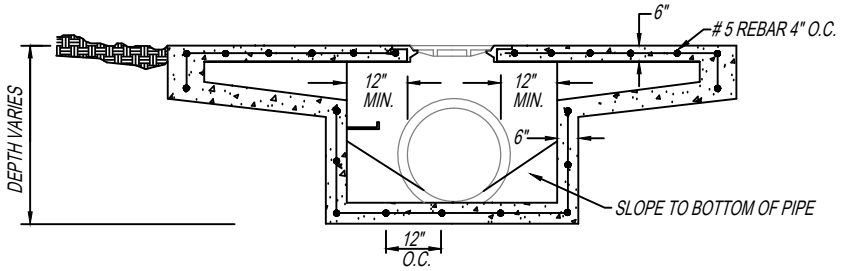
INLET BOX DETAIL AA (#1)



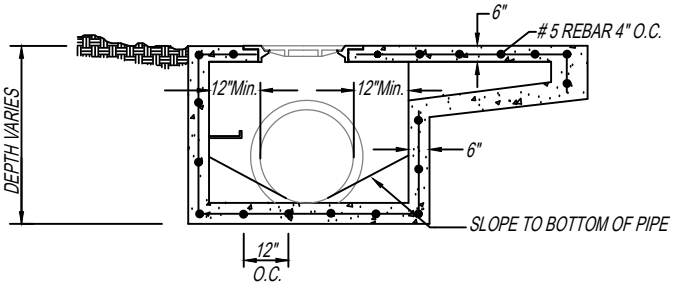
INLET BOX DETAIL AA (#2)



INLET BOX DETAIL BB



DOUBLE WING INLET DETAIL CC

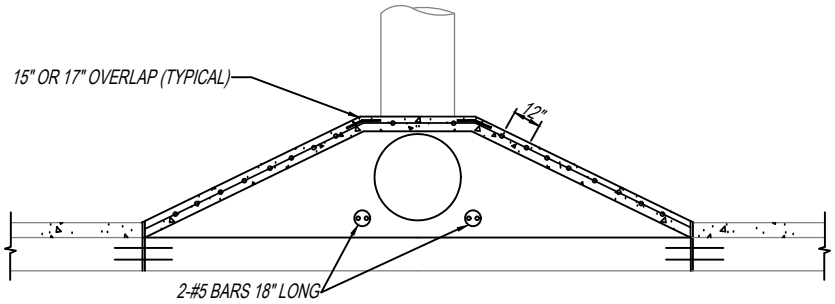


SINGLE WING INLET DETAIL DD

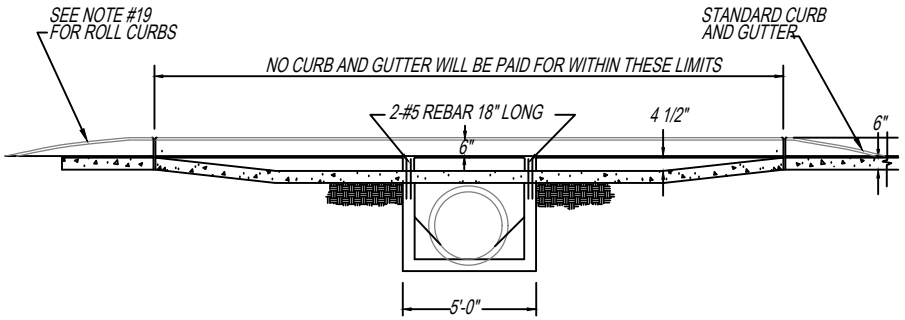
STANDARD DETAILS: STORM	7.03
City of Auburn	

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

DOUBLE WING INLET DETAIL



DOUBLE WING INLET SLAB SECTION



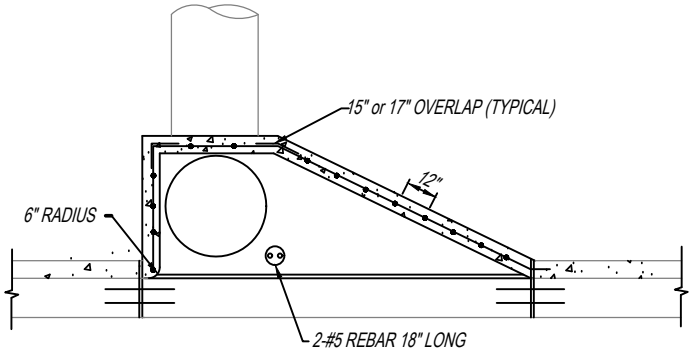
DOUBLE WING INLET ELEVATION

STANDARD DETAILS: STORM	7.04

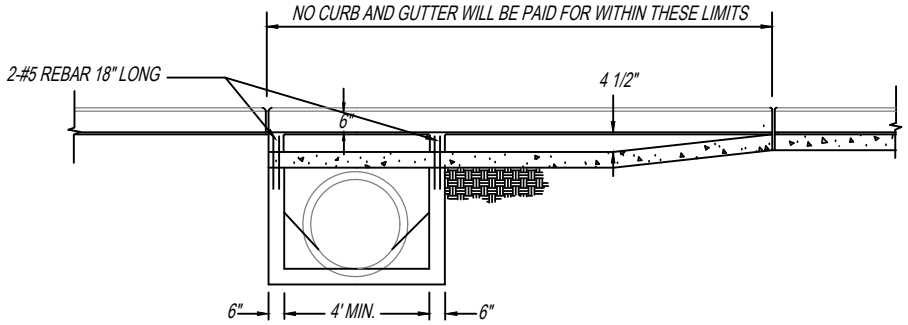
City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

SINGLE WING INLET DETAIL



SINGLE WING INLET SLAB SECTION

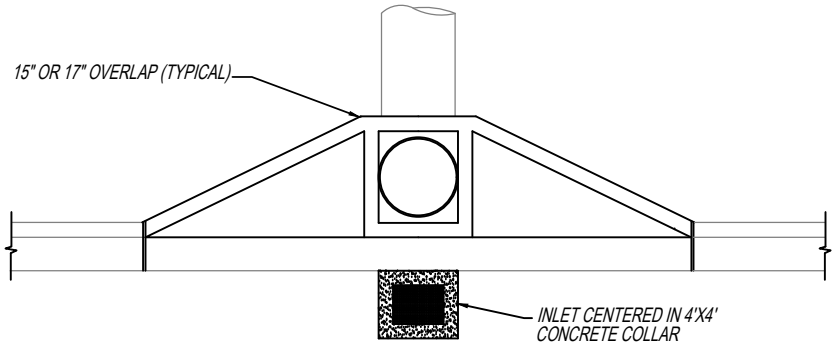


SINGLE WING INLET ELEVATION

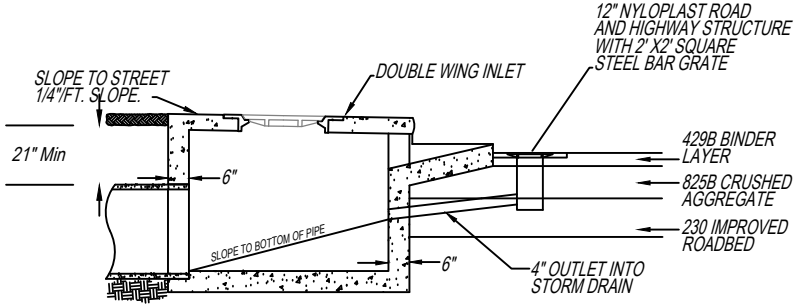
STANDARD DETAILS: STORM	7.05
City of Auburn	

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

INLET BOX DETAIL(temporary drain)



PLAN VIEW

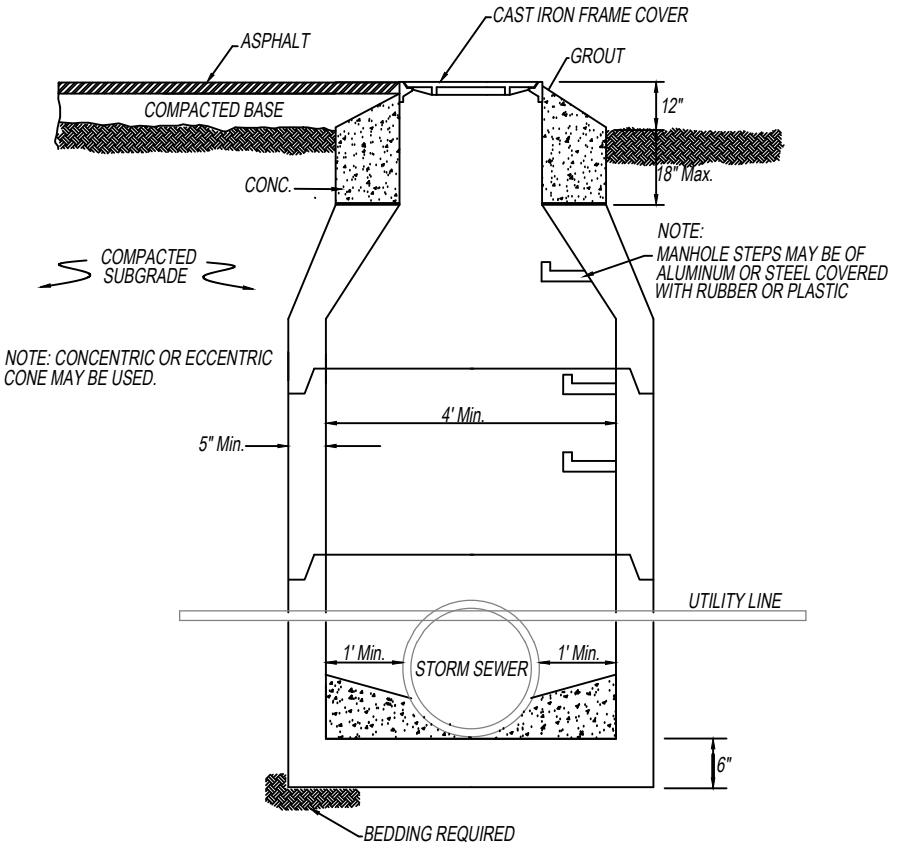


PROFILE VIEW

NOTE:
THIS DETAIL SHALL BE USED AT THE SAG INLETS WHERE WEARING SURFACE WILL NOT BE PLACED AT THIS TIME.

INLET SHALL BE PLACED AT LOWEST POINT IN THE ROADWAY.

UTILITY CONFLICT JUNCTION BOX

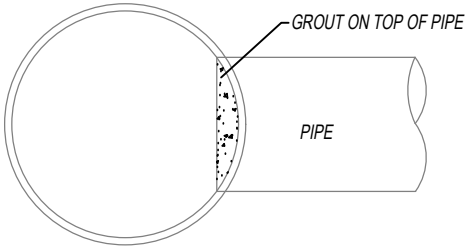


SECTIONAL ELEVATION

NOTES:
1. INSTALL JUNCTION BOX WHEN THERE IS A CONFLICT BETWEEN STORM SEWER AND OTHER UTILITY LINES.
2. IF THE CONFLICTING UTILITY LINE IS A SANITARY SEWER LINE, REPLACE THE V.C. OR PVC. PIPE WITH DUCTILE IRON PIPE.
3. IF POSSIBLE INSTALL THE CONFLICTING UTILITY IN THE UPPER 1/3 OF THE STORM SEWER.

STANDARD DETAILS: STORM	7.06
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

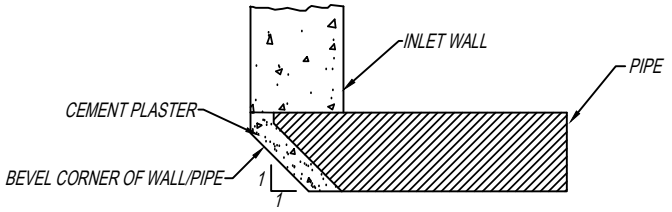
PIPE BEVELL



NOTE:
PIPE MUST BE FLUSH ON SIDES OF BOX.

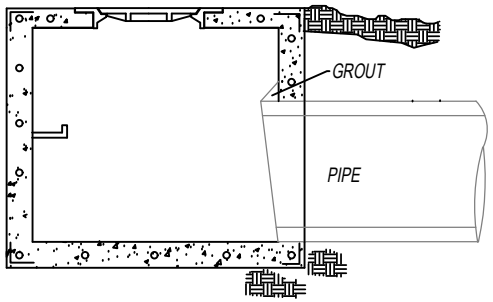
PLAN VIEW

PIPE ENTRANCE IN BOX



BEVELLED RING

(POURED IN PLACE APPLICATION)



ELEVATION

STANDARD DETAILS: STORM	7.07
City of Auburn	

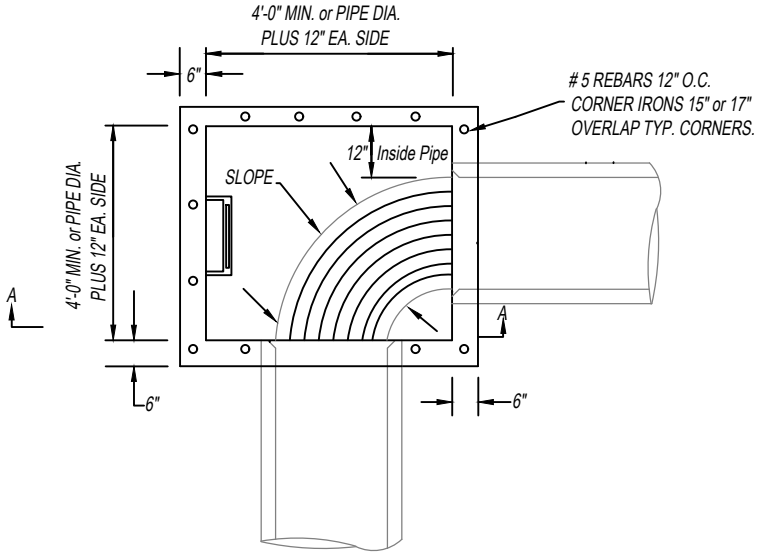
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

NOTES

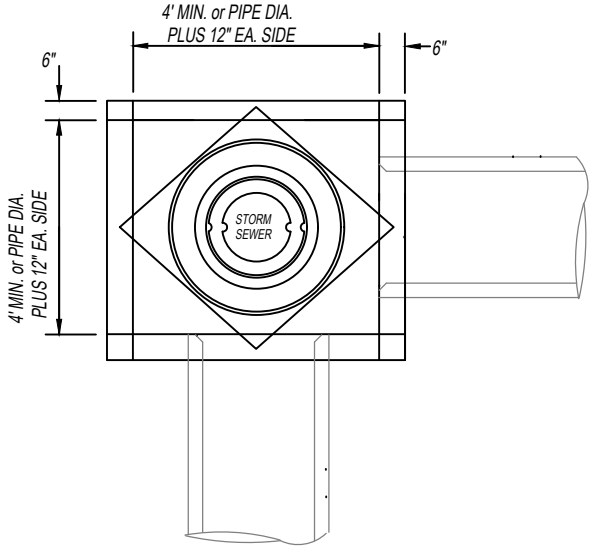
1. HEADWALL AND WINGWALLS SHALL HAVE A RUBBED SMOOTH FINISH. PIPE SHALL BE CUT FLUSH WITH THE INSIDE FACE OF THE HEADWALL.
2. JUNCTION BOX INVERTS SHALL BE SMOOTH AND APPROXIMATE THE CROSS SECTION OF THE PIPE USED. AT LEAST 0.25' OF FALL IS REQUIRED ACROSS ALL JUNCTION BOXES AND/OR INLETS. THE FLOOR SHALL BE SLOPED TO DRAIN ALL WATER TO THE INVERT. ALL PIPE SHALL BE CUT FLUSH WITH THE FACE OF THE JUNCTION BOX AND INLET JUNCTION BOX.
3. CAST IRON FRAME AND COVER SHALL WEIGH 375 POUNDS IN TRAFFIC AND 325 POUNDS OFF TRAFFIC.
4. ALL PIPES SHALL BE LAID WITH ENDS ABBUTTING AND TRUE TO LINE AND GRADE. PIPE SHALL BE FITTED AND MATCHED TO FORM A LINE WITH A SMOOTH, UNIFORM INVERT. GROUT SHALL THEN BE APPLIED SMOOTHLY TO THE OUTSIDE TOP TWO THIRDS AND THE INSIDE BOTTOM ONE HALF TO WATER PROOF ALL PIPE.
5. PRECAST MANHOLES MAY BE USED FOR PIPE UP TO 36". LARGER SIZES MUST BE APPROVED PRIOR TO USE.
6. FOR PIPE SIZES LARGER THAN 42", HEADWALLS SHALL BE AS SPECIFED BY THE CITY ENGINEER.
7. INLETS SHALL NOT BE PLACED IN A RADIUS OF INTERSECTING STREETS OR DRIVES.
8. PRECAST ITEMS MUST BE APPROVED PRIOR TO USE.
9. CHAMFER STRIPS ARE REQUIRED ON ALL HEADWALL EDGES.
10. RIPRAP IS REQUIRED AT ALL PIPE OUTLETS WITH GEOFABRIC. THE SIZE OF THE PAD SHALL BE AS DESIGNED BY THE ENGINEER BUT SHALL BE CONSTRUCTED PER THE DETAIL.
11. DISTANCE FROM RADIUS POINT TO EXISTING EXPANSION OR CONSTRUCTION JOINT SHALL BE AT LEAST 3.0': IF LESS THAN 3.0', CURB AND GUTTER SHALL BE REPLACED TO EXISTING JOINT.
12. MINIMUM INSIDE DIMENSION OF JUNCTION BOXES AND INLETS SHALL BE 4 FEET.
13. TOP OF INLET SHALL BE THE SAME ELEVATION AS ADJOINING CURB AND GUTTER.
14. 2" MINIMUM WEEP HOLES SHALL BE CONSTRUCTED IN INLETS TO FACILITATE SUBGRADE DRAINAGE.
15. IF INLETS ALSO SERVES AS A JUNCTION BOX, CONTOUR BOTTOM AS PER JUNCTION BOX REQUIREMENTS.
16. MORTAR: A CONCRETE MIX EQUIVALENT TO AT LEAST A 3000 PSI STABILITY.
17. NUMBER 5 REBAR SHALL BE INSTALLED INTO ALL CURB AND GUTTER COLD JOINT TIE INS, AT ALL INLETS & JUNCTION BOXES, OR TO BE DETERMINED BY THE PROJECT ENGINEER/ PROJECT INSPECTOR.
18. INSTALL STEPS IN JUNCTION BOXES OR INLET EVERY 16" ON CENTER ACCESSIBLE TO MANHOLE COVER. AT LEAST ONE STEP IS REQUIRED PER BOX, MINIMUM.
19. FOUR FOOT (4') MINIMUM TRANSITIONS FROM ROLL CURB TO STANDARD CURB AND GUTTER TO ALLOW STANDARD INLET TO BE CONSTRUCTION.
20. INVERTS SHALL BE POURED CONCRETE. NO BRICK OR ROCKS SHALL BE USED AS FILLER MATERIAL.
21. #5 BARS REQUIRED IN GUTTER.
22. INVERTS SHALL NOT EXCEED HALF THE DIAMETER OF THE PIPE. NO FLAT AREAS ARE PERMITTED.
23. INLET TOPS SHALL BE SLOPED AT 1/4"/ft TOWARD THE STREET (SEE DETAIL).
24. CONCRETE USED FOR STORM STRUCTURES MUST HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 psi.
25. MODIFIED INLETS MUST HAVE SAME CARRYING CAPACITY AS STANDARD INLETS. DIMENSIONS/DETAILS MUST BE APPROVED BY CITY OF AUBURN ENGINEER PRIOR TO INSTALLATION.
26. HDPE CAN BE USED IN AREAS WHERE IT WILL BE OUTSIDE OF THE ROADWAY PAVEMENT UPON CITY ENGINEER APPROVAL.
27. AN EXPANSION JOINT MUST BE PROVIDED AT THE INLET / CURB FACE.
28. MECHANICAL TAMPING IS REQUIRED AROUND AND BEHIND INLETS.

STANDARD DETAILS: STORM	7.08
City of Auburn	
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	03-01-2024
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

JUNCTION BOX DETAIL



SECTIONAL PLAN



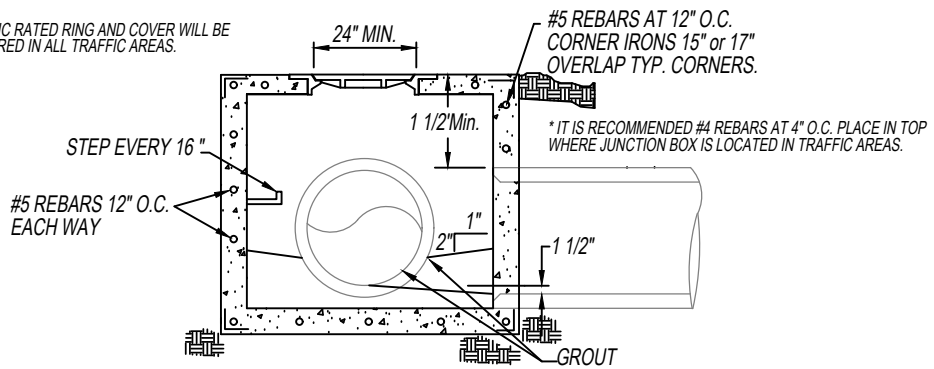
PLAN

STANDARD DETAILS: STORM	7.09
City of Auburn	

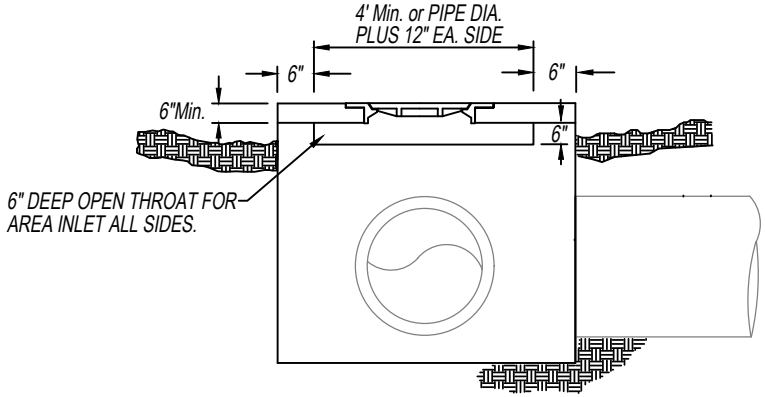
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

AREA INLET/JUNCTION BOX ELEVATION

NOTE:
TRAFFIC RATED RING AND COVER WILL BE REQUIRED IN ALL TRAFFIC AREAS.



SECTIONAL ELEVATION AA



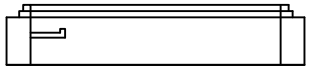
AREA INLET ELEVATION

NOTE:
NOT TO BE USED ON ALDOT RIGHT OF WAY UNLESS APPROVED BY ALDOT IN WRITING.

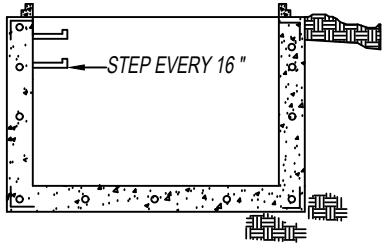
STANDARD DETAILS: STORM	7.10
City of Auburn	

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

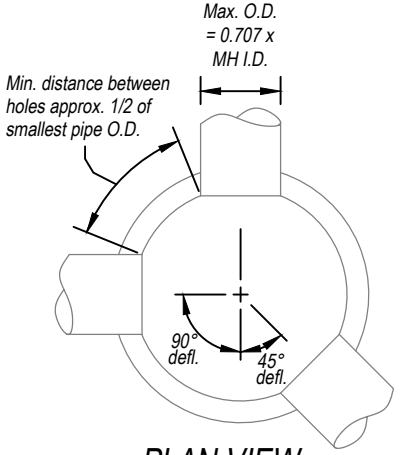
BASE AND RISER DETAIL



RISER DETAIL



SECTIONAL ELEVATION



PLAN VIEW

		MANHOLE DIA. (IN.)				
Pipe Dia.	Req'd* Opening	48	60	72	84	96
15"	23"	85	>90	>90	>90	>90
18"	27"	83	>90	>90	>90	>90
21"	30"	72	>90	>90	>90	>90
24"	36"	55	85	>90	>90	>90
30"	42"	_	65	90	>90	>90
36"	48"	_	45	75	90	>90
42"	56"	_	_	50	70	90
48"	63"	_	_	15	45	70
54"	70"	_	_	_	30	56

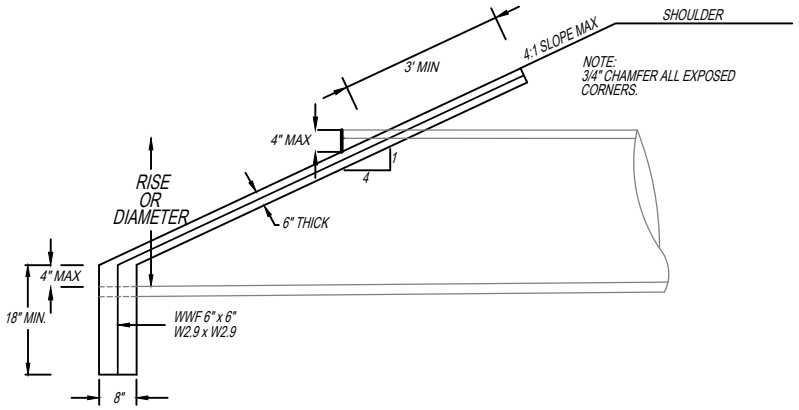
* Opening = Pipe Dia. + (wall thickness x 2) + 3.5" free space

STANDARD DETAILS: STORM	7.11

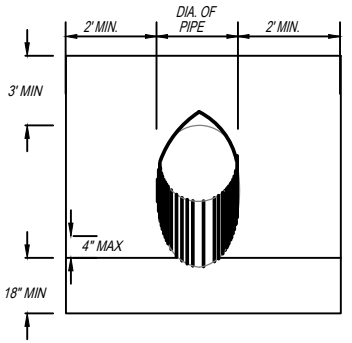
City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

SLOPED PAVED HEADWALL



SLOPED HEADWALL ELEVATION



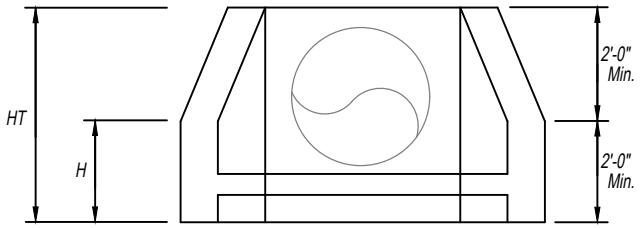
END VIEW

STANDARD DETAILS: STORM	7.12
City of Auburn	

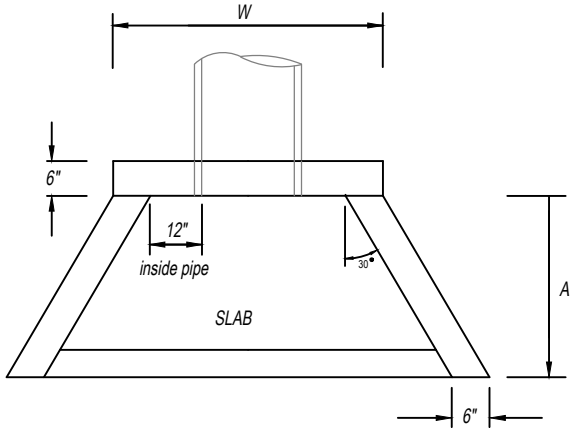
DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

WINGED HEADWALL

HEADWALL DETAIL



WINGED HEADWALL ELEVATION

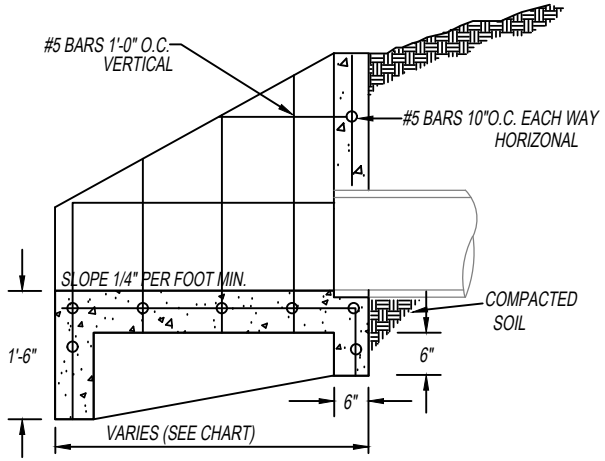


WINGED HEADWALL PLAN

PIPE SIZE CHART

PIPE SIZE	A MIN.	W MIN.	H MIN.	HT MIN.
15 IN	4 FT	DIA.+3 FT	2 FT	4 FT
18 IN	4 FT	DIA.+3 FT	2 FT	4 FT
24 IN	4 FT	DIA.+3 FT	2'-6"	4 FT
30 IN	4.5 FT	DIA.+3 FT	2'-6"	4'-6"
36 IN	5 FT	DIA.+3 FT	3 FT	5 FT
42 IN	5 FT	DIA.+3 FT	3 FT	6 FT
48 IN	5.5 FT	" " " "	3 FT	6'-6"
54 IN	6 FT	" " " "	3'-6"	7 FT
60 IN	6.5 FT	" " " "	3-6"	7'-6"
72 IN	7 FT	" " " "	4 FT	8 FT

NOTE: HEADWALL HEIGHT MAY VARY FROM THE CHART WITH APPROVAL OR RECOMMENDATION OF THE CITY ENGINEER.



SECTIONAL ELEVATION

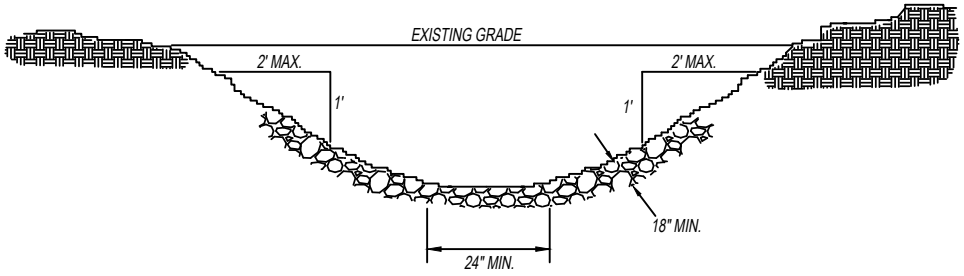
STANDARD DETAILS: STORM	7.13

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

RIP RAP SWALE

RIPRAP DITCH SECTION



PIPE SIZE	BOTTOM WIDTH MINIMUM
15 IN	2 FT
18 IN	2 FT
24 IN	3 FT
30 IN	3 FT
36 IN	4 FT
42 IN	4 FT
48 IN	5 FT
54 IN	5 FT
60 IN	6 FT
72 IN	7 FT

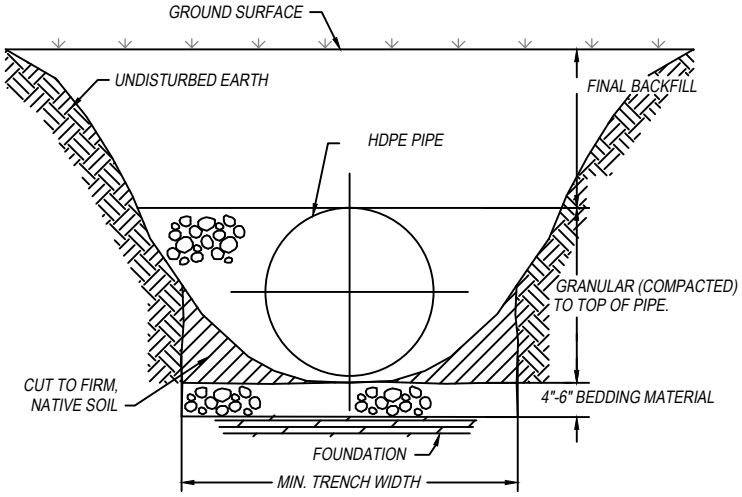
NOTE:

1. BOTTOM WIDTH IS DETERMINED BY ENGINEER.
2. A 3:1 SIDE SLOPE IS PREFERRED, BUT NO SLOPE CAN EXCEED 2:1.

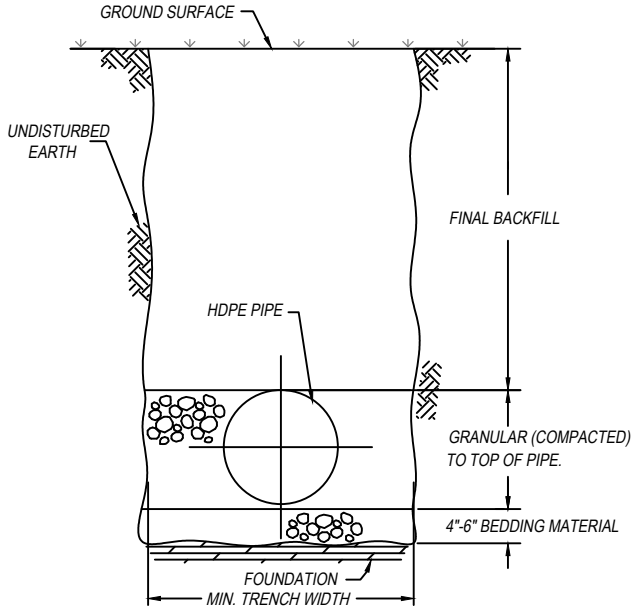
STANDARD DETAILS: STORM	7.14
City of Auburn	

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

HDPE PIPE INSTALLATION



TYPICAL OPEN DITCH CROSS-SECTION
(N.T.S.)



TYPICAL TRENCH CROSS-SECTION
(N.T.S.)

STANDARD DETAILS: STORM	7.15
City of Auburn	

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

HDPE PIPE INSTALLATION

NOTES

1. BEDDING AND BACKFILL MATERIAL SHALL BE CLASS I MEETING ASTM D 2321. SEE DEFINITIONS BELOW.

2. TO PREVENT MIGRATION OF FINES AND LOSS OF PIPE SUPPORT FOR INSTALLATIONS WHERE SIGNIFICANT GROUND-WATER FLOW IS ANTICIPATED, CLASS I BEDDING AND BACKFILL MUST BE USED AND THE ENTIRE PERIMETER OF THE ENCASEMENT SHALL BE WRAPPED WITH AN APPROVED GEOTEXTILE FABRIC.

3. FOR INSTALLATIONS WHERE THE TRENCH BOTTOM IS UNSTABLE, UNDERCUT TO A DEPTH AS REQUIRED BY THE ENGINEER AND REPLACE WITH A SUITABLE BEDDING MATERIAL, PLACED IN 6-INCH LIFTS.

4. ALL HIGH-DENSITY POLYETHYLENE (HDPE) PIPE USED FOR CULVERT AND STORMDRAIN APPLICATIONS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M294, TYPE S, CURRENT EDITION AND VERIFIED THROUGH THE PLASTIC PIPE INSTITUTE (PPI) THIRD PARTY CERTIFICATION PROGRAM. ALL HDPE PIPE DELIVERED AND USED SHALL BEAR THE THIRD PARTY ADMINISTERED PPI SEAL.

5. INSTALLATIONS WHICH MEASURE OVER 15 FEET OF FILL FROM TOP OF PIPE TO FINISHED GRADE LEVEL ARE TO BE APPROVED BY CITY ENGINEER

ASTM D 2321 MATERIAL DEFINITIONS:
CLASS I - ANGULAR CRUSHED STONE OR ROCK, DENSE OR OPEN GRADED WITH LITTLE TO NO FINES. (1/4" TO 1.5" IN SIZE). INCLUDED NOT LIMITED TO SIZES 5, 57, 67, 8, 9, 10, & 610.

UNLESS SPECIFIED BY THE ENGINEER, MINIMUM RECOMMENDED TRENCH WIDTH SHALL BE AS FOLLOWS:

NOMINAL DIAMETER (IN.)	MIN. TRENCH WIDTH (IN.)
15	34
18	39
24	48
30	56
36	64
42	72
48	80
60	96

STANDARD DETAILS: STORM 7.16

City of Auburn

DEPARTMENT: ENGINEERING	REVISIONS:
SCALE: N.T.S.	
DRAWN BY: GINA McCRICKARD	
CITY ENGINEER: Alison Frazier	
APPVD. BY: Alison Frazier	
IMPLEMENTED: 01-01-2022	

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APPENDIX S. Stormwater Storage Facility Final Certification

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City of Auburn

Stormwater Storage Facility Final Certification Form

Engineering Services Department
161 North Ross Street
Auburn, Alabama 36830
(334) 501-7390 FAX (334) 501-7294
www.auburnalabama.org

Project Name: _____

Storage Volume Summary:

	2-Year	5-Year	10-Year	25-Year	100-Year
Design Volume					
As-Built Volume					

Outlet Device Elevation Summary:

	Size and Description Information		Design Elevation	As-Built Elevation
	Design	As-Built		
Outlet Device #1				
Outlet Device #2				
Outlet Device #3				
Outlet Device #4				
Outlet Device #5				
Emergency Spillway				
Bottom of Pond				

(As necessary, please provide any comments or other information necessary to accurately describe the as-built storage facility conditions in a separate Memorandum and attach to this form)

By placing my professional stamp and signature on this form, I certify that this storage facility is constructed in accordance with the approved design on file with the City of Auburn and that all temporary sediment storage components have been removed. I further certify that the all drainage areas designed to be attenuated in the storage facility in fact do drain to this facility and the outlet peak discharge rates are equal to or less than the peak discharge rates as approved for the development.

Signed: _____ Seal:

Date:_____

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APPENDIX T. Stormwater Storage Facility Operations

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STATE OF ALABAMA
LEE COUNTY

STORMWATER STORAGE FACILITY OPERATION AND MAINTENANCE AGREEMENT

THIS AGREEMENT, made and entered into this the _____ day of _____ _____, by and between The City of Auburn, hereinafter referred to as City, and _____ _____, hereinafter referred to as Owner;

WITNESSETH

THAT WHEREAS, Owner is this day accepting responsibility for perpetual care, operation, maintenance, and associated liabilities of the storm water storage facility installed on that certain real property known as _____ , as described in the deed and as shown on the plat thereof recorded in the Deed Book _____ , Page _____ , and/or Plat Book _____ , Page _____ Lee County Court House; and

WHEREAS, as part of construction of the development the City's Phase II Storm Water Ordinance required that a storm water storage facility be constructed; and

WHEREAS, the Owner accepts responsibility for maintenance of the storm water storage facility listed below as prescribed in the attached Operation and Maintenance Plan; and

WHEREAS, the Owner grants access to the City to inspect the storm water storage facility; and

WHEREAS, the Owner understands that this Agreement shall endure to the benefit of his successors in title, whomsoever the may be in the future.

NOW, THEREFORE, it is understood and agreed by and between the parties:

1. Maintenance of the storm water storage facility shall be the sole responsibility of the Owner.
2. The responsibility for maintenance of the storm water storage facility shall pass in the chain of title to the Owner's successor in interest.
3. Operation and maintenance will be in accordance with previously approved Operation and Maintenance Plan.
4. Access is granted to the City to carry out all provisions of the City's Phase II Storm Water Ordinance, including but not limited to inspections of the storm water storage facility.
5. The City will provide a copy of its inspection report to the Owner, and any required maintenance or remedial work identified in the report must be completed within 60 days.
6. The Owner will submit evidence that the required maintenance and/or remedial repairs identified during the City's inspection have been completed within 60 days of receipt of the inspection report.
7. Failure to follow the Operations and Maintenance Plan and/or complete necessary repairs identified during the City's inspection will result in enforcement actions.

Future communications in writing, from the City to the Owner, shall be sent to the Owner's address, as stated below.

In Witness Whereof, the parties have executed this Agreement the day and year above first written.

By: _____
OWNER

_____
GRANTOR'S SIGNATURE

_____
ADDRESS

_____
CITY, STATE

_____
TELEPHONE NUMBER

I, _____ , a Notary Public of said County and State, certify that _____ personally appeared before me this day and acknowledged that he/she is _____ of _____ , an Alabama company and that by authority duly given and as the act of the _____ company, the foregoing instrument was signed in its name and by its _____, sealed with its corporate seal and/or attested by him/her as its _____.

Witness my hand and seal this _____ day of day _____, _____.

_____
Notary Public

(SEAL)

My Commission Expires: _____.

APPENDIX T-1. Subdivision Operation and Maintenance Agreement

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Subdivision Stormwater Storage Facility Operations & Maintenance Agreement

This agreement made and entered into this _____ day of _____ 20____, by and between the City of Auburn, hereinafter referred to as CITY, and _____ _____ hereinafter referred to as DEVELOPER;

WITNESSETH:

WHEREAS, the DEVELOPER intends to construct a development known as _____ _____, located on lots _____ _____, as shown on the plat thereof recorded in the Deed Book _____, Page _____, and/or Plat Book _____, Page _____ Lee County Court House, herein referred to as the DEVELOPMENT; and

WHEREAS, construction of the DEVELOPMENT requires, by the CITY, that the DEVELOPER construct a stormwater storage facility in accordance with the CITY's stormwater management requirements; and

WHEREAS, the stormwater management facility servicing the DEVELOPMENT is located on lot(s) _____ _____, as described in the Deed Book _____, Page _____, and/or Plat Book _____, Page _____ Lee County Court House, herein referred to as the PROPERTY; and

WHEREAS, the DEVELOPER intends to establish a Homeowner's Association which is primarily responsible for the maintenance of landscaping thereon, and maintenance of the stormwater storage facility within the PROPERTY. Operation and maintenance of the stormwater storage facility shall be in accordance with the previously approved Operation and Maintenance Plan; and

WHEREAS, the DEVELOPER understands that this Agreement shall inure to the benefits of his successors in title, whomsoever they may be in the future.

NOW THEREFORE, in consideration of the mutual covenants and agreements, IT IS AGREED, as follows:

1. Each lot in the DEVELOPMENT, and any future subdivision of lots within the DEVELOPMENT, shall have attached to it an equal and undividable ownership in the PROPERTY and each and every lot owner, including lots retained by the DEVELOPER, shall be considered the "OWNER" of the stormwater storage facility(s) located on the PROPERTY. Subject to the other terms of the agreement, the Homeowner's Association shall, as the agent of the OWNER, thereafter be primarily responsible for the landscaping and maintenance of the stormwater storage facility located on the PROPERTY. If the Homeowner's Association is never created, is not responsive, or is dissolved, then the OWNER shall be responsible for all obligations of this agreement.

2. The CITY is authorized to access the PROPERTY to inspect the storm water storage facility as necessary to ascertain that the practices are being maintained and operated in accordance with the approved stormwater management plan.

3. The CITY is authorized to perform the corrective actions identified in the annual stormwater storage facility inspections report if the OWNER or Homeowner's Association does not make the required corrections in the specified time period.

4. Each lot in the DEVELOPMENT, and any future subdivision of lots within the DEVELOPMENT, shall be jointly and severally liable for any expense or cost incurred by the CITY to preserve, maintain, or restore the stormwater storage facility, or landscaping located on the PROPERTY. The CITY shall be empowered, without notice of hearing, to levy a special assessment against each OWNER within the DEVELOPMENT, and any future subdivision of the lots within the DEVELOPMENT, and each and every OWNER agrees to pay for any such special assessment for expenses incurred by the CITY for the maintenance of stormwater facility(s) should they not be maintained by the OWNER or the Homeowner's Association.

5. DEVELOPER, OWNER, and Homeowner's Association agree to indemnify and old harmless the CITY, its board members, employees, agents, and officers from any costs, damage, loss, claim, suit, liability or award which may arise, come, be brought or incurred or assessed because of the existence of, and action or failure to act with respect to the stormwater storage facility, and the drainage and utility easements on the PROPERTY or because of any adverse effect upon any person or property related or alleged to be related to the stormwater storage facility and drainage and utility easements. The CITY shall have the right to defend any such claim and DEVELOPER, OWNER, and Homeowner's Association shall reimburse the CITY for any and all costs and/or expenses, including but not limited to attorney's fees, which the CITY may incur as a result of such claims.

6. The rights and obligations created by this Agreement shall be covenants running within the DEVELOPMENT and future subdivision thereof and shall inure to the benefit of, and be binding upon, the parties, their heirs, personal representatives, successors and assigns.

In Witness Whereof, the parties have executed this Agreement the day and year above first written.

By: _____ (DEVELOPER)

_____ (GRANTOR'S SIGNATURE)

_____ (ADDRESS)

_____ (CITY, STATE)

_____ (TELEPHONE NUMBER)

CITY OF AUBURN, ALABAMA
A Municipal Corporation

By: _____

Its: _____

STATE OF ALABAMA

LEE COUNTY

I, the undersigned authority, a Notary Public in and for said County, in said State, hereby certify that

_____, whose name is signed to the foregoing instrument, on behalf of the Developer, and who is known to me, acknowledged before me on this date that, being informed of the contents of the foregoing document, he/she executed the same voluntarily on the day the same bears date.

Given under my hand and official seal this the _____ day of _____, 2012.

_____
Notary Public

Commission Expires _____

STATE OF ALABAMA

LEE COUNTY

I, the undersigned authority, a Notary Public in and for said County, in said State, hereby certify that

_____, whose name is signed to the foregoing instrument, on behalf of the City of Auburn, Alabama, and who is known to me, acknowledged before me on this date that, being informed of the contents of the foregoing document, he/she executed the same voluntarily on the day the same bears date.

Given under my hand and official seal this the _____ day of _____, 2012.

_____

Notary Public

Commission Expires _____