



For More Information, Contact:

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Planning and Zoning Board Agenda

Board Members: Chairman Will Hawthorne, Vice-Chairman Steve Ambielli, Linda Bennett, Myron Brown, Jimmy Dunn, Jeff Ewing and Mark Hide.

Other Attendees: City Manager Jon C. Williams, City Attorney Kurt Ardaman, City Attorney Dan Langley, Planning Consultant Ed Williams, Planning Director Kelly Carson, Planning Supervisor Shane Friedman, Senior Planner Yvonne Conatser, Planner I Amber McDonald and Recording Secretary Colene Rivera/Ellen King.

Agenda for May 5, 2025 at 6:30 PM

City Hall Commission Chambers
300 W. Plant Street, Winter Garden, Florida

1. Call to Order

Determination of Quorum, Moment of Silence and Pledge of Allegiance

2. Approval of Minutes

1. Minutes of April 7, 2025 Meeting

3. Preliminary Plat / Final Plat / Lot Split

1. 1098 & 1106 E Fullers Cross Road (Dragonfly Reserve) Preliminary Plat
Parcel ID #12-22-27-0000-000-60 and 27-22-12-0000-000-70

4. Adjourn

Next regular Planning and Zoning Board meeting on Monday, June 2, 2025 at 6:30 p.m. in City Hall Commission Chambers, 300 W. Plant Street, Winter Garden, Florida

Posted: April 21, 2025

Please Note: In accordance with Florida Statutes 286.0105: Any person who desires to appeal any decision at this meeting will need a record of the proceedings and for this purpose may need to ensure that a verbatim record of the proceedings is made which includes the testimony and evidence upon which the appeal is based, which such written record is not provided by the City of Winter Garden.

Please Note: In accordance with Florida Statute 286.26: Persons with disabilities needing assistance to participate in any of these proceedings should contact Ellen King, 300 West Plant Street, Winter Garden, FL 34787, (407) 656-4111 EXT.5149- 48 hours in advance of the meeting.



DRAFT

**Planning and Zoning Board
Regular Meeting Minutes
April 7, 2025**

1. CALL TO ORDER

Co-Chairman Steve Ambielli called the meeting of the City of Winter Garden Planning and Zoning Board to order at 6:32 p.m. in the City Hall Commission Chambers. A moment of silence was followed by the Pledge of Allegiance. Quorum was declared present.

Present: Co-Chairman Steve Ambielli and Board Members: Linda Bennett, Jimmy Dunn and Jeff Ewing.

Absent: Chairman Will Hawthorne (excused) with Board Members: Myron Brown (excused) and Mark Hide (excused).

Staff Present: City Attorney Kurt Ardaman, Planning Director Kelly Carson, Planning Supervisor Shane Friedman, Senior Planner Yvonne Conatser, Planner I Amber McDonald and Recording Secretary Ellen King.

Attendees: Emily Rubin of 115 Agnes Street and Ken Warren.

2. APPROVAL OF MINUTES

Motion by Board Member Dunn to approve the regular meeting minutes of March 3, 2025. Seconded by Board Member Ewing and carried unanimously 4 – 0.

ANNEXATION / FUTURE LAND USE MAP AMENDMENT / REZONING (PUBLIC HEARING)

- 3. 14451 W Colonial Drive (Solomon's Auto Body) PCD REZONING
22-22-27-0000-00-075 (-070,-056,-057,-034)**

Planning Supervisor Friedman presented a request to table the PCD Rezoning for property located at 14451 W Colonial Drive to a date uncertain.

***Motion by Board Member Ambielli to table Item 3 to a date uncertain.
Seconded by Board Member Ewing and carried unanimously 4 – 0.***

VARIANCE (PUBLIC HEARING)

- 4. 115 Agnes Street (Rubin-Floyd Residence) VARIANCE
14-22-27-2088-00-080**

Planner McDonald presented a request for a Variance on the property located at 115 Agnes Street to allow a rear yard setback of 15 feet and front yard setback of 20 feet. An adjacent property owner submitted a letter with no objections. Staff recommends approval of the Variance subject to staff conditions.

Board Members inquired if this increases the front setbacks and are any trees impacted? City staff confirmed the setback is less intensive and trees will be reviewed and determined at time of building permit.

Public did not have any comments or questions for this item.

Motion by Board Member Bennett to approve the Variance at the location of 115 Agnes Street subject to staff conditions. Seconded by Board Member Dunn and carried unanimously 4 – 0.

5. 16863 Sanctuary Drive (Colombier Variance) VARIANCE
05-23-27-7801-00-040

Planning Supervisor Friedman presented a request for a Variance on the property located at 16863 Sanctuary Drive to allow a covered patio to be constructed with a rear yard setback of 38 feet subject to staff conditions.

Board Members inquired about the HOA approval? City staff stated the site was approved two-and-a-half years ago with HOA approval for a slightly different request, but the city no longer requires HOA approval.

Public did not have any comments or questions for this item.

Motion by Board Member Bennett to approve the Variance at the location of 16863 Sanctuary Drive subject to staff conditions. Seconded by Board Member Ewing and carried unanimously 4 – 0.

COMPREHENSIVE PLAN ORDINANCES (PUBLIC HEARING)

6. Ordinance 25-12 - Comprehensive Plan Amendment – Adding Property Rights Element

Planning Director Carson presented a request for a proposed amendment to the Comprehensive Plan to add a new Property Rights element that the State requires local municipalities to adopt. The new element provides goals, objectives and policies to confirm the City respects judicially acknowledged and constitutionally protected private property rights and to ensure private property rights are considered in the City of Winter Garden's decision-making process. Staff recommends approval of Ordinance 25-12, requesting staff be allowed to transmit the Comprehensive Plan Amendment to the State Land Planning Agency and adding a new Property Rights Element.

Board Members inquired about the difference from what is currently being done? A board member stated it is a gentle reminder. The City Attorney stated the city already does a very good job not overreaching its power but some cities and counties will overreach and Florida legislature added this element for every local government to recognize public property rights.

Public did not have any comments or questions for this item.

Motion by Board Member Dunn to approve Ordinance 25-12. Seconded by Board Member Ambielli and carried unanimously 4 – 0.

Co-Chairman Steve Ambielli adjourned the meeting at 6:43 pm. Adjourned to the regular Planning and Zoning Board meeting on Monday, May 5, 2025 at 6:30 p.m. in City Hall Commission Chambers, 300 W. Plant Street, Winter Garden, Florida.

ATTEST:

APPROVED:

Recording Secretary Ellen King

Chairman Will Hawthorne

THE CITY OF WINTER GARDEN
PLANNING AND ZONING BOARD AGENDA ITEM # 3

Date: April 25, 2025 **Meeting Date:** May 5, 2025

Subject: 1098 & 1106 E FULLERS CROSS ROAD (Preliminary Plat)

Project Name: 1098 & 1106 E FULLERS CROSS ROAD (Dragonfly Reserve)

Parcel ID: 12-22-27-0000-00-060 & 12-22-27-0000-00-060

Issue: The applicant is requesting approval of a preliminary plat for the development of the properties located at 1098 & 1106 E Fullers Cross Road.

Supplemental Material / Analysis:

Owner / Applicant: Dragonfly Developers, LLC

Current Zoning: R-1 Single-Family Residential District

Proposed Zoning: N/A

Current FLU: LR – Low Density Residential

Proposed FLU: N/A

Summary: The applicant is requesting approval of a preliminary plat for the development of ten (10) single-family lots.

Staff Recommendation(s):

Staff recommends approval of the Preliminary Plat subject to the conditions of the staff report.

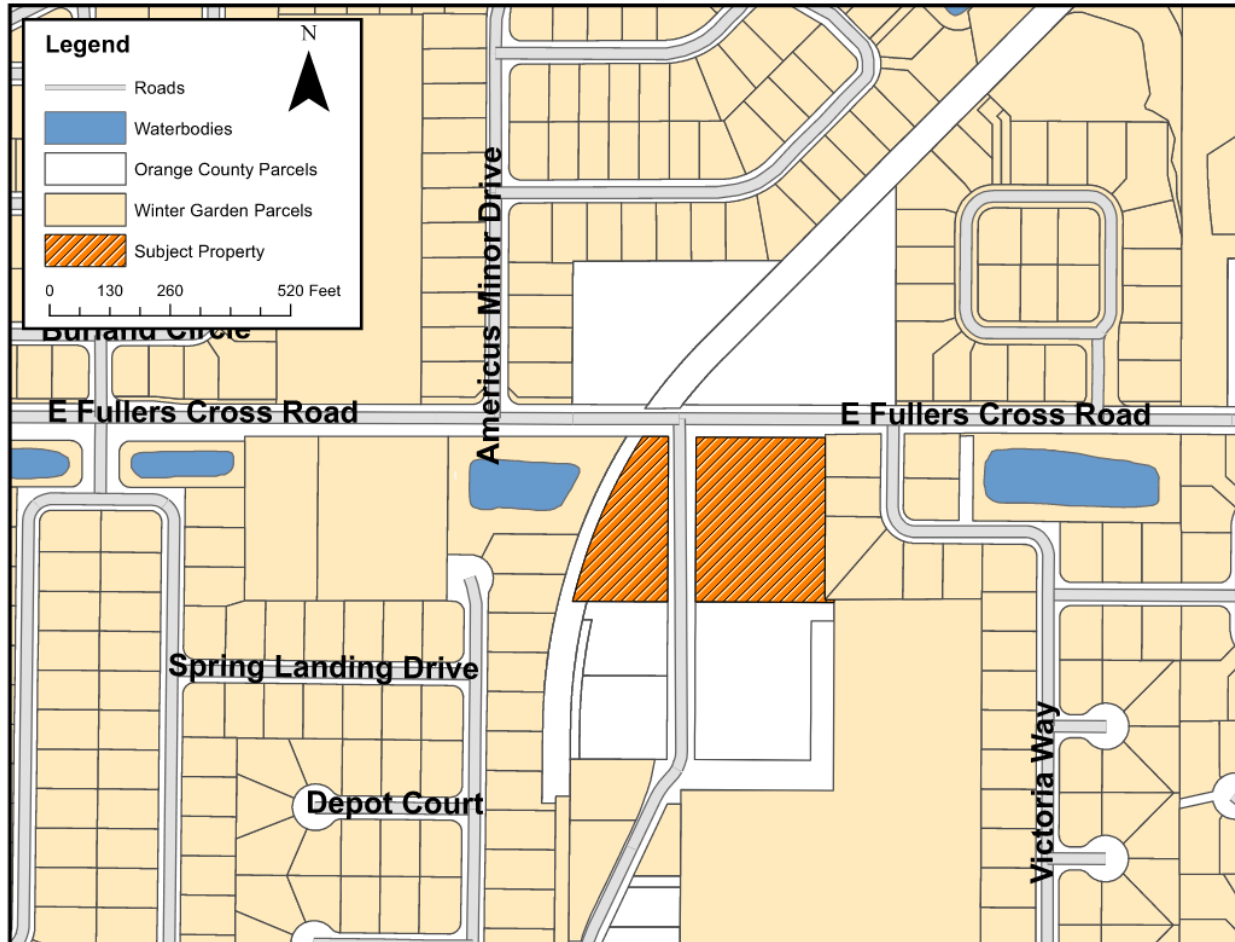
Next Step(s): Construction Plan Approval and Final Plat

Attachment(s): Staff Report
Location Map
Preliminary Plat Plan Set

LOCATION MAP

1098 & 1106 E Fullers Cross Blvd

Preliminary Plat



CITY OF WINTER GARDEN

PLANNING & ZONING DIVISION

300 West Plant Street - Winter Garden, Florida 34787-3011 • (407) 656-4111

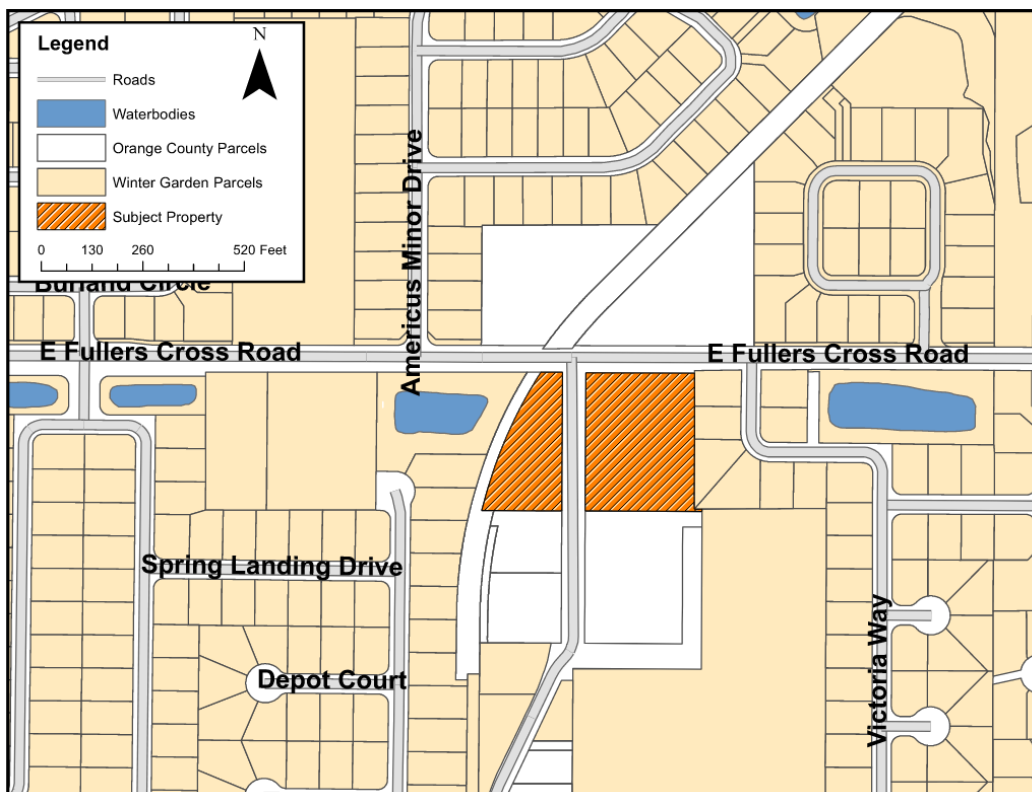
STAFF REPORT

TO: PLANNING AND ZONING BOARD
PREPARED BY: SHANE FRIEDMAN, PLANNING SUPERVISOR
DATE: MAY 5, 2025
SUBJECT: PRELIMINARY PLAT
1098 & 1106 E FULLERS CROSS ROAD (3.40 +/- ACRES)
PARCEL ID # 12-22-27-0000-00-060 & 12-22-27-0000-00-070

APPLICANT: Dragonfly Developers, LLC

INTRODUCTION

The purpose of this report is to evaluate the proposed project for compliance with the City of Winter Garden Code of Ordinances and Comprehensive Plan. The subject property, generally located on the south side of E Fullers Cross Road is approximately 3.40 ± acres in size. The map below depicts the location of the subject property outside the City of Winter Garden municipal limits:



The applicant is requesting approval of a Preliminary Plat of the 3.40 ± acre properties for ten (10) new residential lots. The subject property is located within the City of Winter Garden municipal limits and carries the zoning designation R-1 (Single-family Residential District) in the City of Winter Garden. The subject property is designated Low Density Residential (LR) on the Future Land Use Map of the Comprehensive Plan.

EXISTING USE

The properties are undeveloped. At one time the properties were cleared in 1995 and were planted with pine trees sometime around 1999.

ADJACENT LAND USE AND ZONING

The properties to the north are developed with single-family homes, are zoned A-1 and A-2, and reside within unincorporated Orange County. The properties to the east are developed with single-family homes, are zoned R-1, and reside within the City's municipal boundaries. The properties to the south are undeveloped, are zoned A-1, and reside within unincorporated Orange County. The properties to the west of the subject properties are the West Orange Trail, a stormwater pond belonging to the Crown Point Subdivision, and single-family homes. The Crown Point Subdivision is zoned R-1 and resides within the City's municipal boundaries.

PROPOSED USE

The developer intends to plat the property with ten (10) lots in order to construct ten (10) new single-family homes. The applicant is not requesting a rezoning and all lots will meet, and in some cases exceed, the required lot size minimums for the R-1 (Single-family Residential) zoning district.

The proposed subdivision will not create any new roads with all homes directly accessing E Fullers Cross Road and North West Crown Point Road. There will be two interior lots, Lot 4 and Lot 3, that will share an access driveway. There will be three common area tracts created (Tract A, B, and C) for access, drainage & utilities, lift station, and a landscape buffer. A sidewalk along E Fullers Cross Road already exists, but the applicants and new homeowners will be required to install new sidewalks along North West Crown Point Road.

SUMMARY

Staff and DRC recommend conditional approval of the proposed Preliminary Plat, subject to the following conditions:

1. General Requirements:
 - a. All gravity sanitary pipe and fittings shall be SDR 26.
 - b. All compaction shall be 98% of the modified proctor maximum density (AASHTO T-180).
 - c. As-built record drawings shall comply with City of Winter Garden requirements available on-line (note on plan).
 - d. All Storm ($\geq 12"$) and Sanitary lines ($\geq 6"$) shall be inspected by CCTV prior to completion.
 - e. Use City Standard Detail sheets for utilities and public works (see City website).
 - f. If Thermoplastic pipe is used it shall meet all City material and installation requirements as specified in the City's Standards & Specifications including Class I bedding, HP polypropylene pipe (**not HDPE or N-12**), laser profiling, installation per ASTM D2321, etc. (see under on-line forms on website).
 - g. All utilities shall be underground pursuant to Code (Sec. 18-33) including electrical

power, cable, telephone, etc.

2. A minimum 10' wide drainage, utility and sidewalk easement is required adjacent to all rights-of-way. Side and rear drainage and utility easements required – as shown.
3. Minimum 5' wide concrete sidewalks are required along all project frontages as shown. Existing sidewalks will be checked at completion and any damaged sections shall be replaced.
4. Utilities:
 - a. This subdivision will be subject to Ordinance 24-46 requiring review by Lake Apopka Natural Gas District including the possible requirement to install gas lines in the development.
 - b. Tract A, access & utility easement shall be paved as shown.
 - c. The owners of Lots 3 & 4 shall be required to place their garbage bins on West Crown Point Road since access is not being provided for solid waste trucks to these lots.
5. Stormwater/Drainage:
 - a. Outfalls shall be piped to an acceptable pipe or ditch.
 - b. The Preliminary Geotechnical report shows a seasonal high water table within 1 to 2 feet of ground surface. Final drainage calculations shall include pond drawdown calculations and any construction recommendations (i.e. pond undercutting, etc.).
6. Easements having more than one pipe shall adhere to Section 110-203 of the City Code requiring easement widths based on the following: Minimum Easement Width = (2) x (Depth of Pipe) + (Pipe Diameter + 7').
7. Tree removal shall adhere to the City's Tree Protection Ordinance – separate review, approval and permit is required. Coordinate with the Planning & Building Departments on any tree removal and protection. Additional landscaping and tree replacement may be required with final plan. Pursuant to Code (Chapter 114-70), a tree survey will be required with the preliminary plat submittal showing size and type of trees, trees that will be removed/saved, etc. meeting all Code provisions.
8. The site shall be served by City water, sewer and reuse. All utilities required for the development shall be run to the site at the Developer's expense, including potable water, reclaimed water and sanitary sewer. Final plans shall detail all connections including fire protection, reuse water and domestic water supply. All irrigation on the site shall be designed to be supplied by reclaimed water when available and shall be served by a jumper to potable water until that time.
9. 50% of the water/sewer impact fees shall be paid prior to site or building permit issuance or execution of FDEP permit applications by the City. Sanitary laterals, fittings, and pipes shall be SDR 26 per City standards. City Standard Detail Sheets for utilities and public works shall be adhered to.
10. Permit or exemption from SJRWMD for stormwater is required. Permits or exemptions shall also be required from FDEP for water and sewer and FDEP NPDES NOI as may be applicable.
11. Any signs, screen walls or retaining walls shall require a separate permit from the Building Department.
12. Streetlighting both internally and on all street frontages is required pursuant to City Code – dark skies lighting is required.

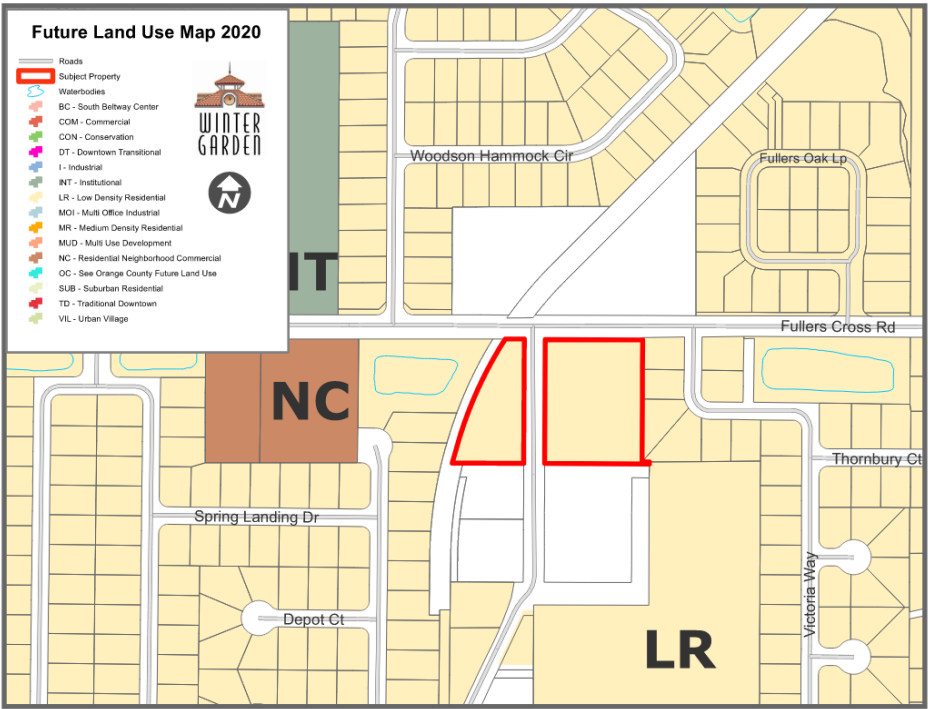
13. Certificates of Occupancy for any building will not be issued until the Certificate of Completion for the infrastructure has been issued by the City Engineer and the final plat has been approved and recorded.

14. Since this proposed subdivision is ten (10) lots please beware of Section 110-332. – Procedure. Where the city commission has determined that fees shall be paid in lieu of or in addition to the dedication of land, the developer shall pay fees in accordance with the following schedule: (1) For any residential development consisting of ten or more parcels or lots, the fees shall be paid, in their entirety, prior to the issuance of any building permit for any building or structure to be located upon any parcel or lot in the residential development. This will be paid at the applicant's preconstruction meeting.

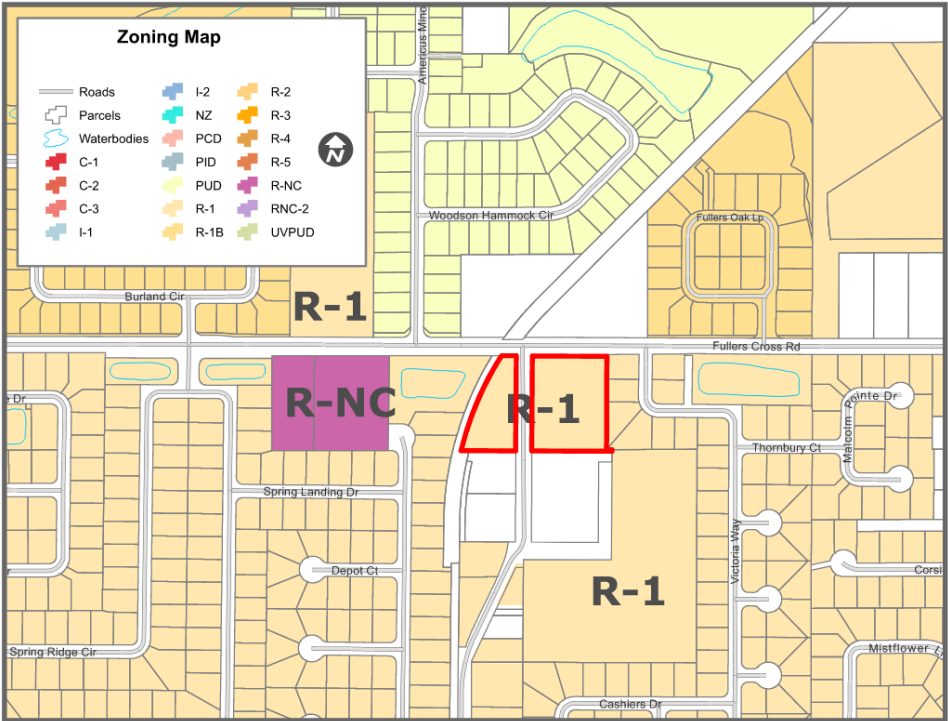
AERIAL PHOTO
1098 & 1106 E Fullers Cross Road



Future Land Use Map
1098 & 1106 E Fullers Cross Road



Zoning Map
1098 & 1106 E Fullers Cross Road



END OF STAFF REPORT

1098 & 1106 E. FULLERS CROSS RD
WINTER GARDEN, FLORIDA

A portion of the lands lying within the Southwest 1/4 of the Northeast 1/4 of Section 12, Township 22 North, Range 27 East, described as follows:

Commencing at the Northwest corner of Lot 3, of the Plat of Tuscany, as recorded in Plat Book 26, Page 107, of the Public Records of Orange County, Florida, thence with the Westerly line of said Plat of Tuscany, and being the Center line of Seventh Street, now vacated and abandoned, as described in Official Records Book 4043, Page 2927, of the Public Records of Orange County, Florida, South 00°03'38" West, 5.98 feet, to the Southerly Right-of-Way Line of East Fullers Cross Road, and the Point of Beginning.

Thence continue with the Westerly line of said Plat of Tuscany, and being the Center line of said Seventh Street (as vacated), South 00°03'38" West, 350.23 feet, to the Southwest corner of Lot 6, of said Plat of Tuscany, and being on the Center line of Fourth Avenue, now vacated and abandoned, as described in said Official Records Book 4043, Page 2927; thence departing the Westerly line of said Plat of Tuscany, and being the Center line of said Seventh Street (as vacated), and with the Center line of said Fourth Avenue (as vacated), South 89°30'39" West, 280.01 feet, to the Easterly Right-of-Way line of North West Crown Point Road, thence departing the Center line of said Fourth Avenue (as vacated), and with the Easterly Right-of-Way line of North West Crown Point Road, North 00°03'38" East, 352.75 feet, to the Southerly Right-of-Way Line of said East Fullers Cross Road; thence departing the Easterly Right-of-Way line of said North West Crown Point Road, and with the Southerly Right-of-Way Line of said East Fullers Cross Road, South 89°58'24" East, 280.00 feet, to the Point of Beginning.

And

Commencing at the Northwest corner of Lot 3, of said Plat of Tuscany, thence with the Westerly line of said Plat of Tuscany, and being the Center line of said Seventh Street (as vacated), South 00°03'38" West, 5.98 feet, to the Southerly Right-of-Way Line of East Fullers Cross Road; thence continue with the Westerly line of said Plat of Tuscany, and being the Center line of said Seventh Street (as vacated), South 00°03'38" West, 350.23 feet, to the Southwest corner of Lot 6, of said Plat of Tuscany, and being on the Center line of said Fourth Avenue (as vacated); thence departing the Westerly line of said Plat of Tuscany, and being the Center line of said Seventh Street (as vacated), and with the Center line of said Fourth Avenue (as vacated), South 89°30'39" West, 280.01 feet, to the Easterly Right-of-Way line of North West Crown Point Road; continue with the Center line of said Fourth Avenue (as vacated), South 89°30'39" West, 60.00 feet, to the Westerly Right-of-Way line of North West Crown Point Road, and being the Point of Beginning.

Thence Continue with the Center line of said Fourth Avenue (as vacated), South 89°30'39" West, 205.16 feet, to the Easterly Right-of-Way line of West Orange Trail, as shown on that Map of Florida Department of Environmental Protection Rails to Trails / Apopka to Mabel Project as prepared by Jones, Wood, & Gentry, Inc., Job #28032-B, dated September 22, 1995; thence departing the Center line of said Fourth Avenue (as vacated), and with the Easterly Right-of-Way line of said West Orange Trail, being on a curve concave Southeasterly, with a radius of 1145.85 feet, a delta of "03°02'27", and a chord bearing and distance of North 15°36'53" East, 60.14 feet, Northeasterly along said curve an arc length of 60.15 feet, to the Point of Tangency; thence with the Easterly Right-of-Way line of said West Orange Trail, North 17°07'06" East, 15.42 feet, to the beginning of a curve concave Southeasterly, with a radius of 1145.85 feet, a delta of 15°37'15", and a chord bearing and distance of North 24°55'43" East, 311.43 feet; thence Northeasterly along said curve an arc length of 312.40 feet, to the Southerly Right-of-Way Line of said East Fullers Cross Road; thence departing the Easterly Right-of-Way line of said West Orange Trail, and with the Southerly Right-of-Way Line of said East Fullers Cross Road, South 89°58'24" East, 53.54 feet, to the Westerly Right-of-Way line of said North West Crown Point Road; thence departing the Southerly Right-of-Way Line of said East Fullers Cross Road, and with the Westerly Right-of-Way line of said North West Crown Point Road, South 00°03'38" West, 353.30 feet, to the Point of Beginning.

Containing 148,242.99 Square Feet or 3.40 Acres, more or less.



TAX PARCEL ID #:

12-22-27-0000-00-060
12-22-27-0000-00-070

ADDRESS:
1098 & 1106 E FULLERS CROSS RD
WINTER GARDEN, FL 34787



WETLAND:
THERE ARE NO JURISDICTIONAL WETLANDS ON SITE.

THIS PROPERTY IS LOCATED IN ZONE X, WHICH INDICATES AN AREA OUT OF THE 100 YEAR FLOOD PER FEMA FLOOD MAP 12095C0205H, DATED SEPTEMBER 24, 2011.

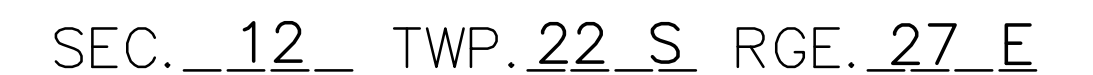
#20 IMMOKALEE FINE SAND
#44 SMYRNA-SMYRNA WET, FINE SAND
#46 TAVARES FINE SAND

APPLICANT / OWNER: DRAGONFLY DEVELOPERS, LLC
225 ZACHARY WADE ST
WINTER GARDEN, FL 34787-2514

ENGINEER: AMERICAN CIVIL ENGINEERING CO.
THOMAS H. SKELTON, P.E.
207 N. MOSS ROAD, SUIT 211
WINTER SPRINGS, FLORIDA 32708
PHONE: (407) 327 - 7700
EMAIL: tomskelton468@gmail.com

SURVEYOR: IRELAND & ASSOCIATES SURVEYING, INC.
800 CURRENCY CIRCLE STE 1020
LAKE MARY, FLORIDA 32746
PATRICK IRELAND, PSM
PHONE: (407) 678 - 3366
FAX: (407) 320 - 8165
EMAIL: www.irelandsurveying.com

TO SUBDIVIDE PROPERTY INTO TEN (10) SINGLE
FAMILY RESIDENTIAL LOTS.

[illegible]

03/06/2024	REVISED PER WINTER GARDEN	MDS	THS
12/20/2024	REVISED PER WINTER GARDEN	MDS	THS

PREPARATION DATE: NOVEMBER 01, 2024



207 N. MOSS ROAD, SUITE 211 WINTER SPRINGS, FLORIDA 32708
PHONE: (407) 327-7700, FAX: (407) 327-0227
CERTIFICATE OF AUTHORIZATION NO.: 00008729

THOMAS H. SKELTON, PE
REGISTRATION NO. 42752

PREPARED FOR:
DRAGONFLY DEVELOPERS, LLC

STANDARD GENERAL CONDITIONS:

- All construction shall conform to City of Winter Garden Standards, Specifications and Ordinances.
- Fencing, if approved, shall meet all City requirements for height, type, etc. Chain link fencing, if approved, shall be vinyl coated per Code.
- The City of Winter Garden will inspect private site improvements only to the extent that they connect to City owned/maintained systems (roadways, drainage, utilities, etc.). It is the responsibility of the Owner and Design Engineer to ensure that privately owned and maintained systems are constructed to the intended specifications. The City is not responsible for the operation and maintenance of privately owned systems, to include, but not be limited to, roadways, parking lots, drainage, stormwater ponds or on-site utilities.
- No fill or runoff will be allowed to discharge onto adjacent properties; existing drainage patterns shall not be altered. The applicant should note that if approval is granted, the City of Winter Garden is not granting rights or easements for drainage from, or onto, property owned by others. Obtaining permission, easements or other approvals that may be required to drain onto private property is the Owner/Developer's responsibility. Should the flow of stormwater runoff from, or onto adjacent properties be unreasonable or cause problems, the City will not be responsible and any corrective measures required will be the responsibility of the Owner. Site construction shall adhere to the City of Winter Garden erosion and sediment control requirements as contained in Chapter 106 - Stormwater. If approval is granted by the City of Winter Garden, it does not waive any permits that may be required by federal, state, regional, county, municipal or other agencies that may have jurisdiction.
- The Owner and Contractor are responsible for meeting all provisions of ADA and Florida Accessibility Code, including accessible route sidewalks that will connect to public sidewalks on S.R. 50.
- The Contractor is responsible for the notification, location and protection of all utilities that may exist within Approval by the City Commission (site plan) will be required prior to issuance of site or building permit(s).
- After final plan approval, a preconstruction meeting will be required prior to any commencement of construction. The applicant shall provide an erosion control and street lighting plan at the preconstruction meeting and shall pay all engineering review and inspection fees prior to construction. Inspection fees in the amount of 2.25% of the cost of all site improvements shall be paid prior to issuance of the site or building permit.

S 89°58'24" E 384.12'

12-22-27-1845-02-060
RETENTION POND 3
CROWN POINT SPRINGS UNIT 2
FLU: SINGLE FAMILY
ZONING: R-1

12-22-27-1845-02-060
LOT 206
CROWN POINT SPRINGS UNIT 2
FLU: SINGLE FAMILY
ZONING: R-1

12-22-27-1845-02-070
LOT 207
CROWN POINT SPRINGS UNIT 2
FLU: SINGLE FAMILY
ZONING: R-1

12-22-27-1845-02-080
LOT 208
CROWN POINT SPRINGS UNIT 2
FLU: SINGLE FAMILY
ZONING: R-1

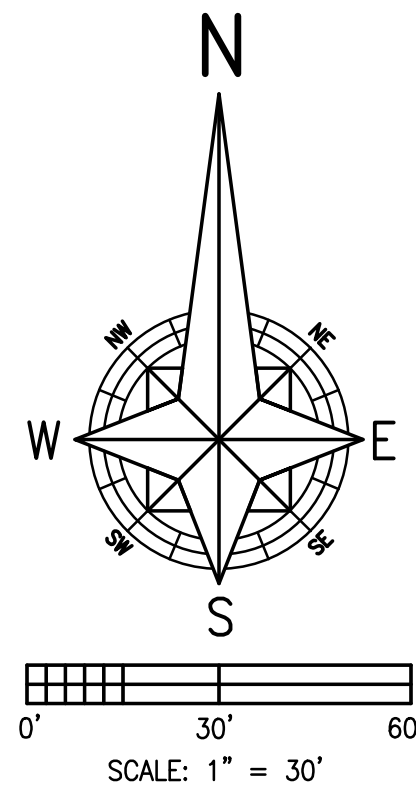
12-22-27-1845-02-060
VILLAGES FOR FRIENDS PROPERTIES INC
FLU: INSTITUTION CHARITABLE
ZONING: A-1

12-22-27-0000-00-006
BAUTISTANAVARRO/ADOLFO/ESTUAR TORRES
FLU: SINGLE FAMILY
ZONING: A-2

L1
S 00°03'38" W 5.98'(C)
S 00°03'38" W 6.08'(M)
L2
S 89°30'39" W 60.00'(M)
Chord Data
N 15°36'53" E 60.14'(M)
C2
R = 1145.85'(C)
Δ = 03°00'27"(C)
L = 60.15'(M)
Chord Data
N 24°55'43" E 311.43'(M)
L3
N 17°07'06" E 15.42'(M)
L4
S 89°58'24" E 35.47'(M)
L5
S 89°58'24" E 60.00'(M)

BUILDING SETBACKS

LOCATION	REQUIRED
FRONT	30 FEET (MIN.)
REAR	20% OF LOT DEPTH
SIDE	10 FEET
SIDE (CORNER)	20 FEET



PROJECT DATA:

TOTAL PROPERTY AREA: 148,243 SF 3.40 AC
ZONING: R-1 (SFR)
FUTURE LAND USE: LR - LOW DENSITY RESIDENT
PROPOSED GROSS DENSITY: 2.94 UNITS/ACRE
(10 UNITS / 3.40 AC)
MINIMUM LOT SIZE: 10,000 SF
MINIMUM LOT WIDTH: 85 FEET
MINIMUM LOT DEPTH: 100 FEET
LOT WIDTH @ CUL-DE-SAC: 35 FEET

LOT AREA:

LOT 1: 10,625 SF (0.24 AC)
LOT 2: 10,625 SF (0.24 AC)
LOT 3: 12,331 SF (0.28 AC)
LOT 4: 12,400 SF (0.28 AC)
LOT 5: 10,702 SF (0.25 AC)
LOT 6: 11,000 SF (0.25 AC)
LOT 7: 13,746 SF (0.32 AC)
LOT 8: 12,205 SF (0.28 AC)
LOT 9: 13,130 SF (0.30 AC)
LOT 10: 15,686 SF (0.36 AC)
TRACT A: 16,973 SF (0.39 AC)
TRACT B: 7,204 SF (0.17 AC)

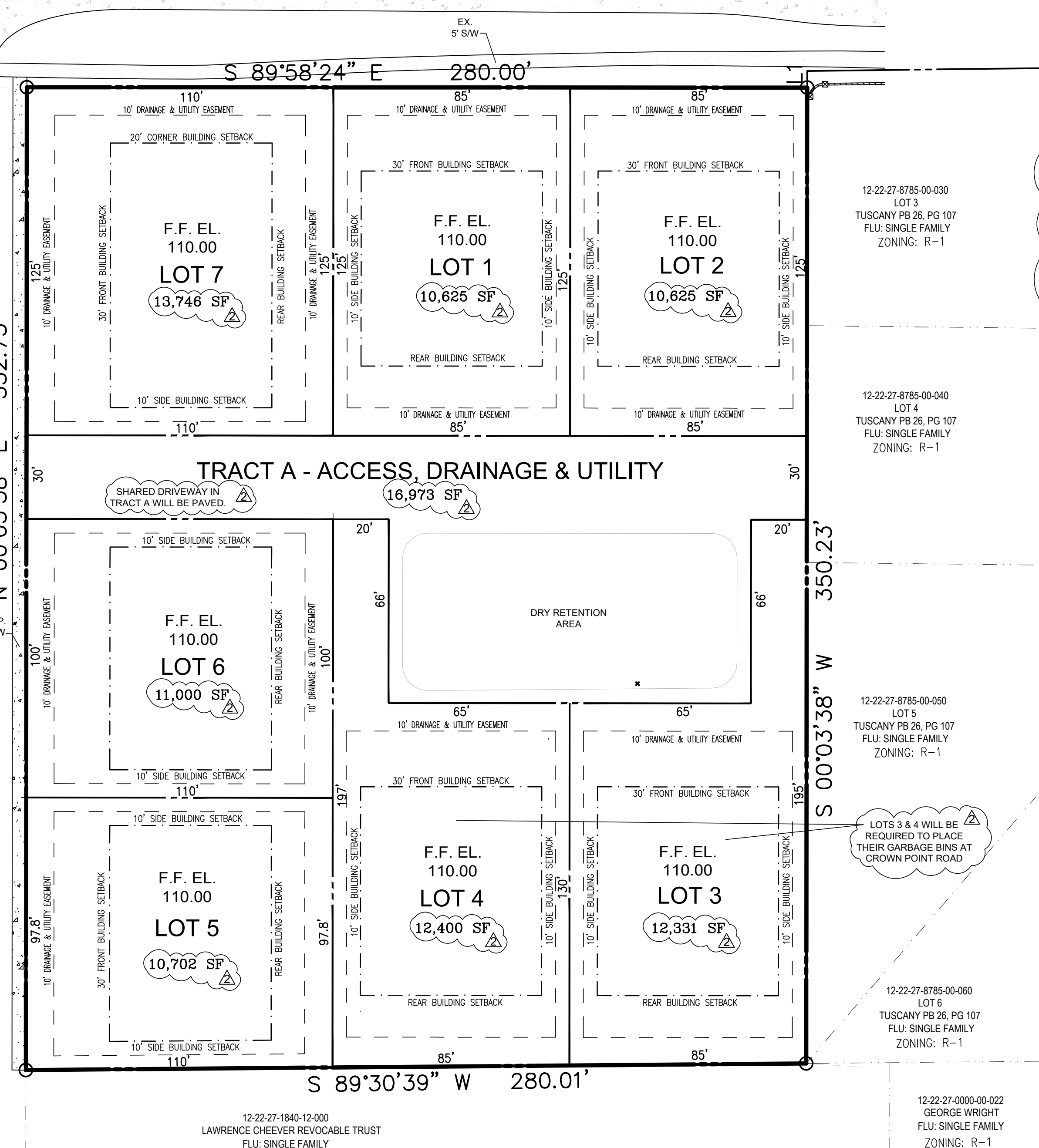
DEVELOPMENT NOTES:

- ALL GRAVITY SANITARY PIPE AND FITTINGS SHALL BE SDR 26.
- ALL COMPACTION SHALL BE 98% OF THE MODIFIED PROCTOR MAXIMUM DENSITY (AASHTO T-180).
- AS-BUILT RECORD DRAWINGS SHALL COMPLY WITH CITY OF WINTER GARDEN REQUIREMENTS AVAILABLE ON-LINE.
- ALL STORM (>=12") AND SANITARY LINES (>=6") SHALL BE INSPECTED BY CCTV PRIOR TO COMPLETION.
- IF THERMOPLASTIC PIPE IS USED IT SHALL MEET ALL CITY MATERIAL AND INSTALLATION REQUIREMENTS AS SPECIFIED IN THE CITY'S STANDARDS & SPECIFICATIONS INCLUDING CLASS I BEDDING, HP POLYPROPYLENE PIPE (NOT HDPE OR N-12), LASER PROFILING, INSTALLATION PER ASTM D3221, ETC..
- ALL UTILITIES SHALL BE UNDERGROUND PURSUANT TO CODE (SEC. 18-33) INCLUDING ELECTRICAL POWER, CABLE, TELEPHONE, ETC.
- EASEMENTS HAVING MORE THAN ONE PIPE SHALL ADHERE TO SECTION 110-203 OF THE CITY CODE REQUIRING EASEMENT WIDTHS BASED ON THE FOLLOWING: MINIMUM WIDTH = (2) x (DEPTH OF PIPE) + (PIPE DIAMETER + 7").
- TREE REMOVAL WILL ADHERE TO THE CITY'S TREE PROTECTION ORDINANCE - SEPARATE REVIEW, APPROVAL AND PERMIT IS REQUIRED.
- 50% OF THE WATER/SEWER IMPACT FEES SHALL BE PAID PRIOR TO SITE OR BUILDING PERMIT ISSUANCE OR EXECUTION OF FDEP PERMIT APPLICATIONS BY THE CITY.
- ANY SIGNS, SCREEN WALLS OR RETAINING WALLS SHALL REQUIRE A SEPARATE PERMIT FROM THE BUILDING DEPARTMENT.
- STREET LIGHTING WILL BE PROVIDED ALONG ALL STREET FRONTAGES PURSUANT TO CITY CODE - DARK SKIES LIGHTING IS REQUIRED.
- CERTIFICATES OF OCCUPANCY FOR ANY BUILDING WILL NOT BE ISSUED UNTIL THE CERTIFICATE OF COMPLETION FOR THE INFRASTRUCTURE HAS BEEN ISSUED BY THE CITY ENGINEER AND THE FINAL PLAT HAS BEEN APPROVED AND RECORDED.
- ALL UTILITIES SHALL BE UNDERGROUND PURSUANT TO CODE (SEC. 18-33) INCLUDING ELECTRICAL POWER, CABLE, TELEPHONE, ETC.
- A MINIMUM OF THREE (3) TREES SHALL BE REQUIRED AT THE TIME A CERTIFICATE OF OCCUPANCY IS ISSUED FOR EACH NEWLY CONSTRUCTED SINGLE-FAMILY BUILDING ON EACH LOT HAVING 6,000 SQUARE FEET OR MORE. THE REQUIRED TREES TO BE INSTALLED, RATHER THAN RETAINED, SHALL BE A MINIMUM OF TEN FEET TALL AND SHALL BE ON THE RECOMMENDED STOCK LIST.
- MINIMUM 5 FOOT WIDE CONCRETE SIDEWALKS ARE REQUIRED ALONG ALL PROJECT FRONTAGES.
- EXISTING SIDEWALKS WILL BE CHECKED AT COMPLETION AND DAMAGED SECTIONS SHALL BE REPLACED.
- THE SUBDIVISION WILL CREATE AN HOMEOWNERS ASSOCIATION (HOA).
- A 5 FOOT DRAINAGE AND UTILITY EASEMENT WILL BE PROVIDED ALONG THE SIDE AND REAR LOT LINES UNLESS OTHERWISE DEPICTED.
- DURING CONSTRUCTION PLAN REVIEW THAT APPLICANT WILL BE REQUIRED TO SUBMIT A LANDSCAPE PLAN AND FENCE DETAIL FOR TRACT B. THE FENCE SHOULD BE PROVIDED ALONG THE REAR PROPERTY LINES OF LOT 8, 9 AND 10.

E FULLERS CROSS ROAD

N NORTH WEST CROWN POINT ROAD

60' RIGHT-OF-WAY N 00°03'38" E 352.75'



S 89°58'24" E 384.12'

12-22-27-1845-02-060
RETENTION POND 3
CROWN POINT SPRINGS UNIT 2
FLU: SINGLE FAMILY

12-22-27-1845-02-060
LOT 206
CROWN POINT SPRINGS UNIT 2
FLU: SINGLE FAMILY

12-22-27-1845-02-070
LOT 207
CROWN POINT SPRINGS UNIT 2
FLU: SINGLE FAMILY

12-22-27-1845-02-080
LOT 208
CROWN POINT SPRINGS UNIT 2
FLU: SINGLE FAMILY

12-22-27-1845-02-060
VILLAGES FOR FRIENDS PROPERTIES INC
FLU: INSTITUTION CHARITABLE

12-22-27-0000-00-006
BAUTISTANAVARRO/ADOLFO/ESTUAR/TORRES
FLU: SINGLE FAMILY

C1
R = 1145.85'(C)
Δ = 03°00'27"(C)
L = 60.15'(M)
Chord Data
N 15°36'53" E 60.14'(M)

C2
R = 1145.85'(C)
Δ = 15°37'15"(C)
L = 312.40'(M)
Chord Data
N 24°55'43" E 311.43'(M)

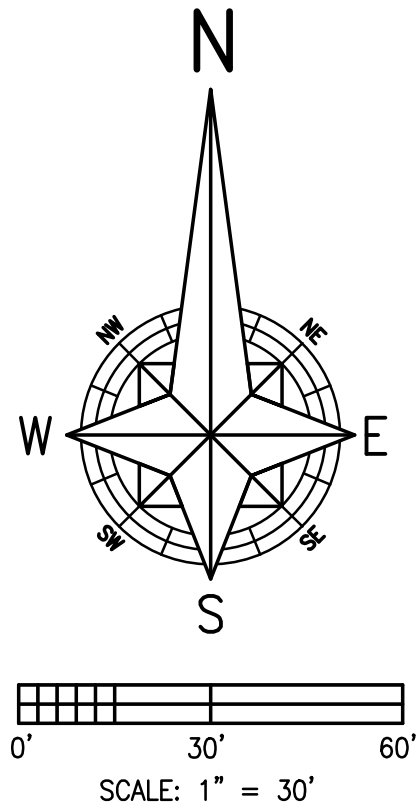
L1
S 00°03'38" W 5.98'(C)
S 00°03'38" W 6.05'(M)

L2
S 89°30'39" W 60.00'(M)

L3
N 17°07'06" E 15.42'(M)

L4
S 89°58'24" E 35.47'(M)

L5
S 89°58'24" E 60.00'(M)



LEGEND

- EXISTING TREE
- EXISTING TREE TO BE REMOVED

TOTAL INCHES TO BE REMOVED: 394"
TOTAL INCHES TO BE REMOVED (OAK): 0"
TOTAL INCHES TO BE REMOVED (PINE): 258"
TOTAL INCHES TO BE REMOVED (PALM): 0"
TOTAL INCHES TO BE REMOVED (OTHER): 46"

TOTAL INCHES 12" OR GREATER TO BE REMOVED: 24"

EXISTING TREES TO BE REMOVED DUE
TO PROPOSED GRADING AND
PROXIMITY TO PROPOSED
IMPROVEMENTS

TREE REMOVAL / REPLACEMENT NOTES:

- TREES 12" OR GREATER WILL BE REPLACED AT A RATIO OF 2:1.
- ALL TREES REMOVED SHALL BE REPLACED PER CHAPTER 114, SECTION 114-70.
- A MINIMUM OF THREE (3) TREES SHALL BE REQUIRED AT THE TIME A CERTIFICATE OF OCCUPANCY IS ISSUED FOR EACH NEWLY CONSTRUCTED SINGLE-FAMILY BUILDING ON EACH LOT HAVING 6,000 SQUARE FEET OR MORE. THE REQUIRED TREES TO BE INSTALLED, RATHER THAN RETAINED, SHALL BE A MINIMUM OF TEN FEET TALL AND SHALL BE ON THE RECOMMENDED STOCK LIST.

TREE MITIGATION TABLE

NO. OF TREES REMOVED	NO. OF TREES REQUIRED
<12" = 42	(1:1) = 42
≥12" = 1	(2:1) = 2

E FULLERS CROSS ROAD

N NORTH WEST CROWN POINT ROAD

W. ORANGE TRAIL

TRACT B

LOT 8

LOT 9

LOT 10

LOT 7

LOT 1

LOT 2

LOT 6

LOT 5

LOT 4

LOT 3

TRACT A ACCESS & UTILITY

TRACT A

12-22-27-8785-00-030
LOT 3
TUSCANY PB 26, PG 107
FLU: SINGLE FAMILY

12-22-27-8785-00-040
LOT 4
TUSCANY PB 26, PG 107
FLU: SINGLE FAMILY

12-22-27-8785-00-050
LOT 5
TUSCANY PB 26, PG 107
FLU: SINGLE FAMILY

12-22-27-8785-00-060
LOT 6
TUSCANY PB 26, PG 107
FLU: SINGLE FAMILY

12-22-27-0000-00-022
GEORGE WRIGHT
FLU: SINGLE FAMILY

12-22-27-1840-13-010
LAWRENCE CHEEVER REVOCABLE TRUST
FLU: SINGLE FAMILY

12-22-27-1840-13-010
LAWRENCE CHEEVER REVOCABLE TRUST - LOT 1
FLU: SINGLE FAMILY

12-22-27-1840-12-000
LAWRENCE CHEEVER REVOCABLE TRUST
FLU: SINGLE FAMILY

12-22-27-1840-12-000
LAWRENCE CHEEVER REVOCABLE TRUST LOT 1
FLU: SINGLE FAMILY

12-22-27-1840-12-000
LAWRENCE CHEEVER REVOCABLE TRUST - LOT 12
FLU: SINGLE FAMILY

DATE:	NOVEMBER 1, 2024
SCALE:	1" = 30'
DESIGNED:	THS
DRAWN:	SCM
CHECKED BY:	THS
JOB NO.:	24345
EMAIL:	tomskelton468@gmail.com
DATE:	
DESIGNED:	
DRAWN:	
CHECKED BY:	
JOB NO.:	
EMAIL:	
DATE:	
DESIGNED:	
DRAWN:	
CHECKED BY:	
JOB NO.:	
EMAIL:	

AMERICAN CIVIL
ENGINEERING CO.

307 N. MOSS ROAD, SUITE 211 WINTER SPRINGS, FLORIDA 32708
(407) 770-0000
CERTIFICATE OF AUTHORIZATION NO.: 00000720

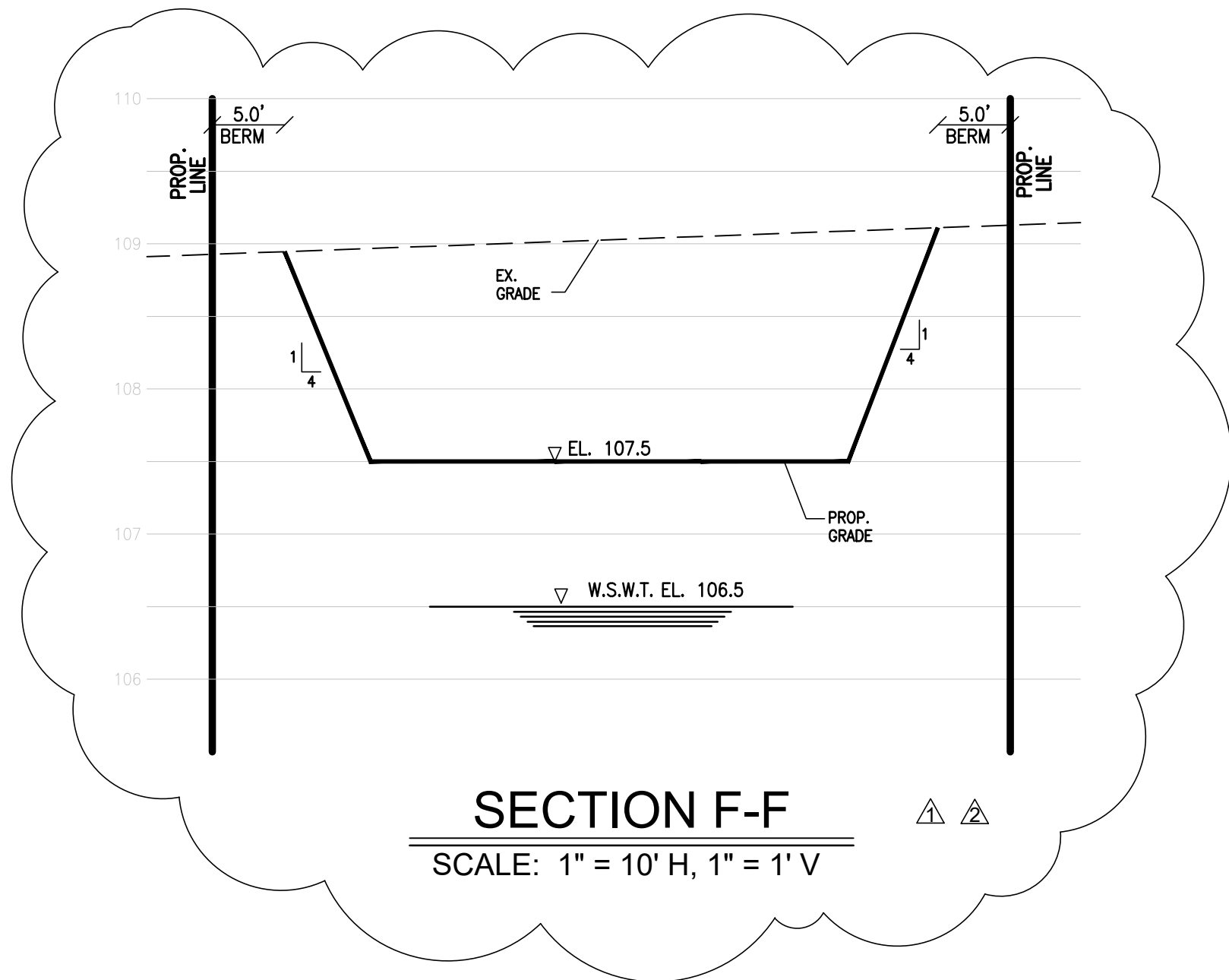
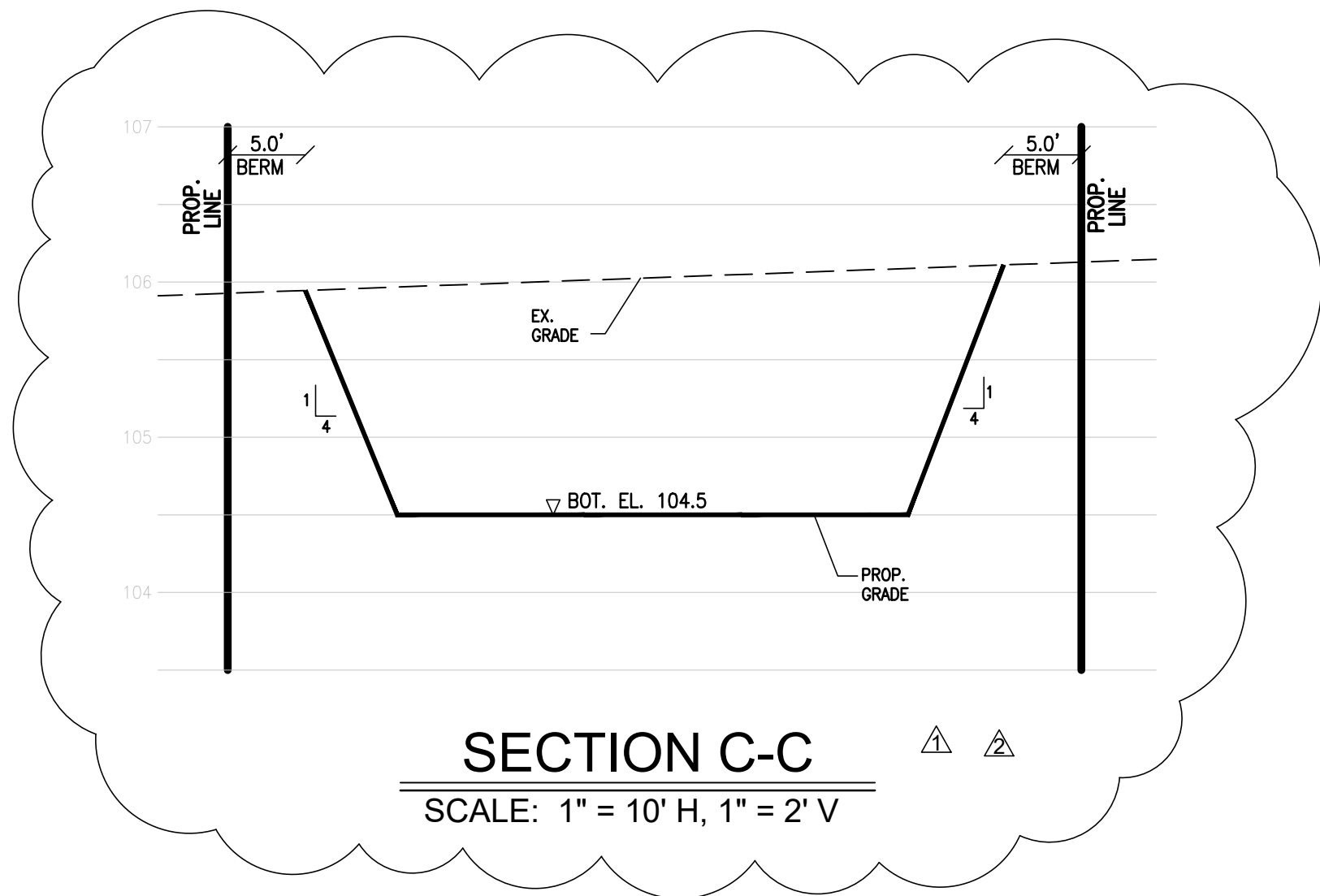
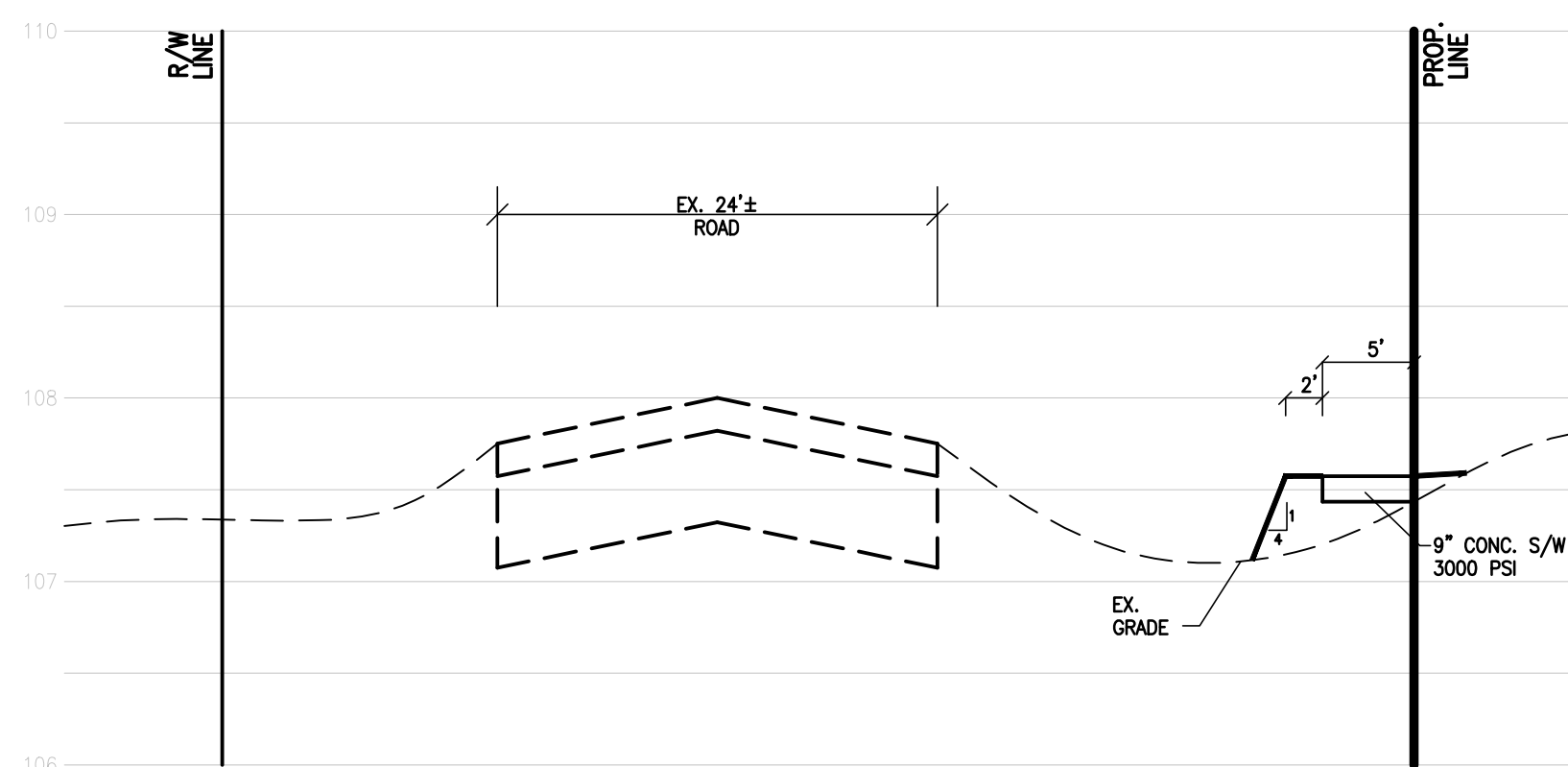
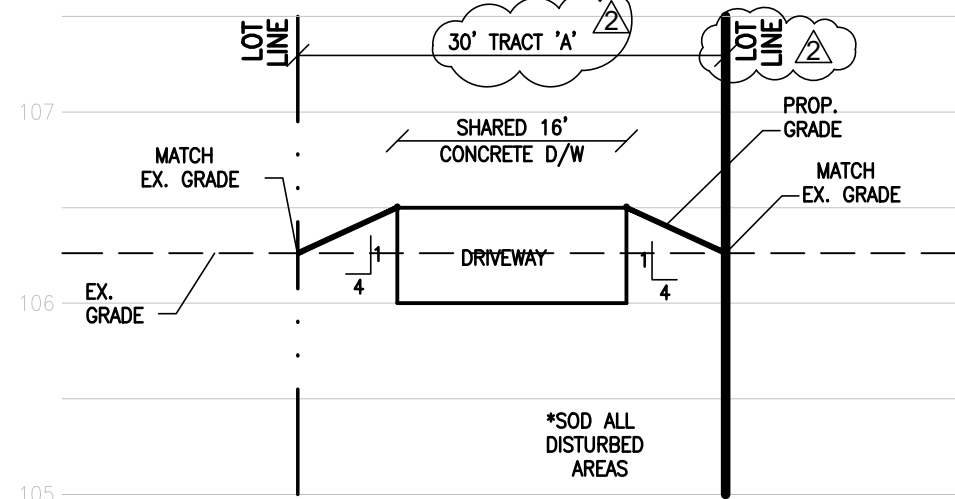
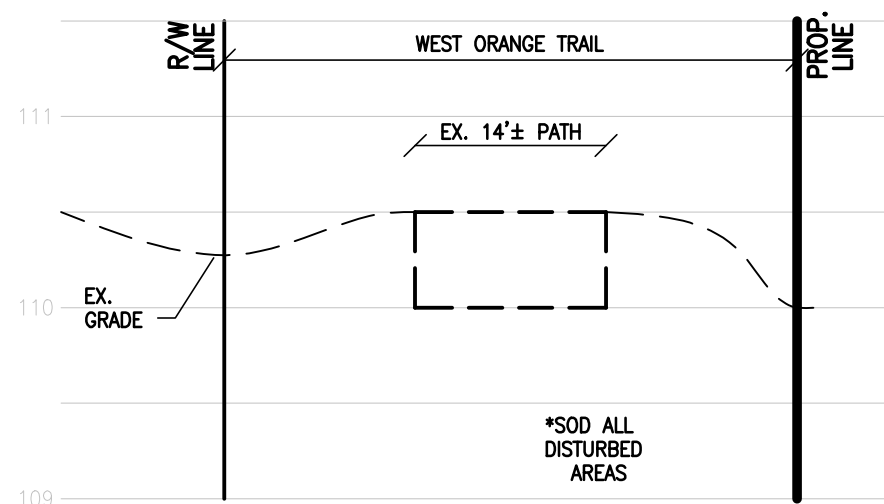
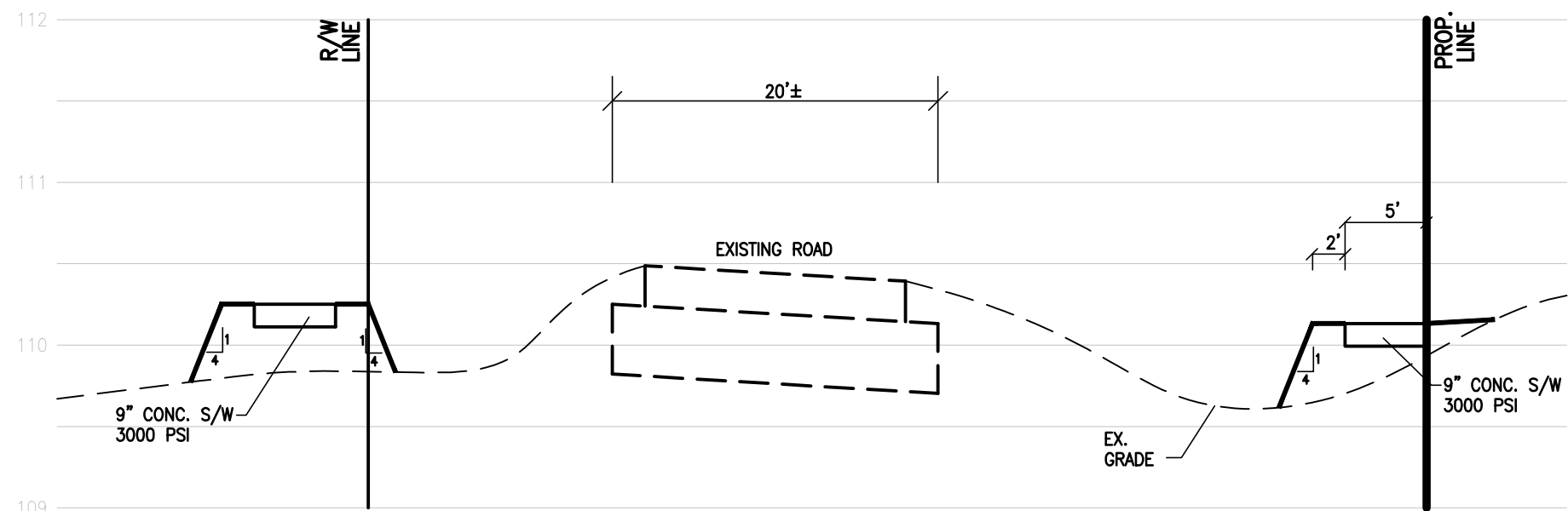
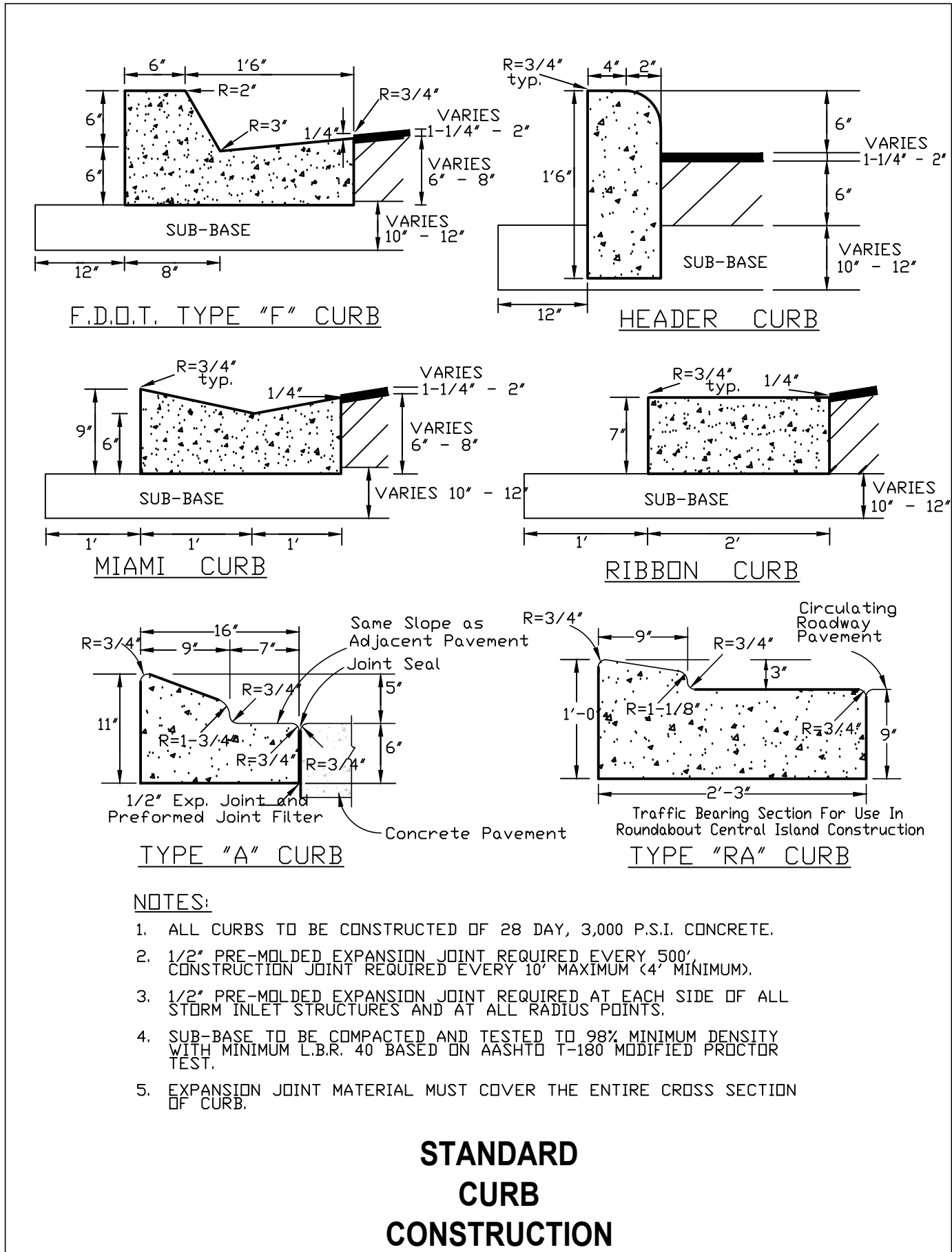
PRELIMINARY TREE REMOVAL/REPLACEMENT PLAN

DRAGONFLY RESERVE

WINTER GARDEN, FLORIDA

THOMAS H. SKELTON, PE
REGISTRATION NO. 42752

SHEET: C5



CITY OF WINTER GARDEN - GENERAL NOTES:

1.

ALL UTILITY SYSTEMS AND IMPROVEMENTS CONSTRUCTED IN THE CITY OF WINTER GARDEN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MANUAL OF STANDARDS AND SPECIFICATIONS FOR UTILITY CONSTRUCTION FOR THE CITY OF WINTER GARDEN, TO BE REFERRED TO AS MSS/CWG. THE LATEST EDITION AT THE TIME PERMITS ARE APPROVED SHALL BE EFFECTIVE FOR THE DURATION OF THE SUBJECT WORK OR PROJECT DEVELOPMENT.
2.

THE CITY OF WINTER GARDEN GENERAL NOTES AND DETAILS ARE PROVIDED FOR THE CONVENIENCE OF FIELD PERSONNEL. THEY DO NOT INCLUDE ALL REQUIREMENTS OF THE MSS/CWG. THE CONTRACTOR SHALL REFER TO THE FULL TEXT OF THE MSS/CWG FOR FURTHER DETAIL AND CLARITY WHEN NEEDED.
3.

ANY REQUEST FOR VARIANCE OR NONCOMPLIANCE FROM THE MSS/CWG NOTED ABOVE MUST BE APPROVED BY THE CITY ENGINEER OR UTILITIES DIRECTOR.
4.

THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING IN CLOSE PROXIMITY TO WATER, WASTEWATER, RECLAIMED WATER AND OTHER UTILITY SYSTEMS. THE CONTRACTOR SHALL COORDINATE UTILITY LOCATIONS WITH RESPECTIVE UTILITY OWNERS AND/OR CALL,"SUNSHINE ONE CALL", 1-800-432-4770 A MINIMUM OF 72 HOURS IN ADVANCE.
5.

CONTRACTOR'S DAMAGE OF WINTER GARDEN UTILITY SYSTEM: THE CONTRACTOR SHALL IMMEDIATELY NOTIFY AND REPORT DAMAGE TO THE CITY OF WINTER GARDEN UTILITY DIVISION, (NO MESSAGE) PHONE # 407-656-4100.
6.

IMMEDIATE REPAIR OF DAMAGED UTILITY SYSTEM: THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY DAMAGE TO THE CITY OF WINTER GARDEN UTILITY SYSTEM AS REQUIRED BY THE UTILITY OWNER AT CONTRACTORS COST. IN CASE OF UNRESPONSIVE ACTION BY THE CONTRACTOR, THE CITY RESERVES RIGHT TO REPAIR DAMAGE. THE CONTRACTOR SHALL REIMBURSE THE CITY OF WINTER GARDEN OF ALL REPAIR COST.
7.

ADVANCE NOTIFICATION OF CONSTRUCTION: THE CONTRACTOR SHALL NOTIFY CITY OF WINTER GARDEN, UTILITY DIVISION, PH.# 407-656-4100, AT LEAST SEVEN (7) CALENDAR DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITY.
8.

ADVANCE NOTIFICATION OF UTILITY CONNECTION: THE CONTRACTOR SHALL NOTIFY THE CITY OF WINTER GARDEN AT LEAST SEVEN CALENDAR DAYS IN ADVANCE TO SCHEDULE CONNECTIONS TO UTILITY SYSTEM.
9.

UTILITY VALVE OPERATION: ONLY CITY OF WINTER GARDEN UTILITY PERSONNEL SHALL OPERATE VALVES AND FIRE HYDRANTS. THE CONTRACTOR, WHEN NEEDED, SHALL CALL THE CITY TO REQUEST VALVE OPERATIONS AT LEAST TWO (2) DAYS IN ADVANCE OF CONSTRUCTION WORK.
10.

OPERATIONS INVOLVING WATER OR WASTEWATER FACILITIES INCLUDING PUMPING STATIONS: THE CONTRACTOR SHALL COORDINATE AT LEAST TWO (2) WEEKS IN ADVANCE, ANY CONSTRUCTION OPERATION THAT MAY REQUIRE THE DISCONTINUATION OF SERVICE OR OPERATION OF A FACILITY. THE CITY WILL PROVIDE PERSONNEL TO OPERATE THE CITY FACILITIES.
11.

REQUIRED TESTING BY CONTRACTOR: THE CONTRACTOR SHALL NOTIFY THE CITY OF WINTER GARDEN AT LEAST TWO (2) DAYS PRIOR TO SAMPLING ACTIVITIES FOR PURPOSE OF TESTING AS REQUIRED BY THE CITY. THE CONTRACTOR SHALL NOT TEST OR SAMPLE WITHOUT OBSERVATION BY CITY INSPECTION PERSONNEL.
12.

TEMPORARY OR CONSTRUCTION WATER SERVICE CONNECTIONS PROVIDED BY FIRE HYDRANT CONNECTION: THE CITY WILL PROVIDE METER ON FIRE HYDRANT. THE CONTRACTOR SHALL PROVIDE NON-REFUNDABLE ACCOUNT INITIATION FEE, A REFUNDABLE SECURITY DEPOSIT FOR THE METER APPARATUS AND PAY ALL COST FOR WATER USED.
13.

ALL AS-BUILT MEASUREMENTS & ELEVATIONS ARE TO BE MADE BY A LICENSED LAND SURVEYOR.

CITY OF WINTER GARDEN - WATER SYSTEM NOTES:

1.

THE CONTRACTOR SHALL PROVIDE AND INSTALL A CITY APPROVED BACKFLOW DEVICE ASSEMBLY AT EACH CONNECTION POINT TO THE CITY WATER SYSTEM.
2.

THE CONTRACTOR SHALL HYDROSTATICALLY TEST ALL WATER MAINS AND SERVICE LATERALS AT 150 PSI FOR A TWO HOUR PERIOD. TESTING MUST BE OBSERVED BY A CITY INSPECTOR.
3.

THE CONTRACTOR SHALL INSTALL WARNING TAPE OVER ALL NEW WATER MAINS. WARNING TAPE SHALL BE AS FOLLOWS: NON-DETECTABLE, SIZE 3" WITH "WATER LINE BELOW", MUST BE PLACED 8" TO 12" BELOW FINISHED GRADE ON ALL PVC WATER MAINS, LATERALS AND HEADER TEES, NUMBER 10 GAUGE TRACER WIRE SHALL BE ATTACHED TO THE TOP OF THE PIPE WITH DUCT TAPE, AT LEAST FIVE TIMES PER JOINT. THE TRACER WIRE SHALL ALSO BE ATTACHED TO ALL PVC LATERALS AND ATTACHED TO THE OUTSIDE OF EACH VALVE BOX SO THAT A PIPE LOCATOR CAN BE CONNECTED TO IT.
4.

THE CONTRACTOR SHALL INSTALL WATER MAINS PER MSS/CWG SPECIFICATIONS. SOLVENT CEMENTED JOINTS AND THRUST BLOCKS ON PIPING SYSTEMS SHALL NOT BE ALLOWED.
5.

THE CONTRACTOR SHALL INSTALL ALL WATER MAINS TO A MINIMUM DEPTH OF 36 INCHES AND A MAXIMUM DEPTH OF 42 INCHES BELOW FINAL GRADE.
6.

THE CONTRACTOR SHALL INSTALL ALL SERVICE LATERALS A UNIFORM DISTANCE APART. LOCATED ON PROPERTY LOT LINE AT 90° FROM THE WATER MAIN. SERVICE LATERALS SHALL BE SEPARATELY CONNECTED TO THE WATER MAIN, NOT SPUJED TOGETHER.
7.

THE CONTRACTOR SHALL CUT A "W" INTO CONCRETE CURB, LOCATED INSIDE OF A PAINTED BLUE SQUARE, LOCATED DIRECTLY IN FRONT OF EACH SERVICE LATERAL.
8.

THE CONTRACTOR SHALL INSTALL CURB STOP, IN METER BOX, CURB STOP SHALL BE SET 8" BELOW FINISHED GRADE.
9.

THE CONTRACTOR SHALL PROVIDE AND INSTALL IN-LINE VALVES ON WATER MAINS AT 1,000 FOOT MAXIMUM SPACING BETWEEN VALVES. VALVES SHALL BE LOCATED ON ALL TEES AND CROSSES. WATER MAINS SHALL BE PLACED UNDER SIDEWALKS WHERE POSSIBLE.
10.

ALL WATERMAINS SHALL BE CLEANED BY PIGGING THE LINE WITH A FOAM PIG (MINIMUM OF 2 IN SERIES, 1 FLUSH). A FULL BORE FLUSH MAY BE REQUIRED AFTER PIGGING TO ENSURE THE PIPE IS CLEAN AND READY FOR SERVICE. THE CONTRACTOR SHALL COORDINATE LINE PIGGING AND FULL BORE FLUSH WITH THE CITY INSPECTOR.
11.

THE CONTRACTOR SHALL DEMONSTRATE THAT LOCATION WIRE INSTALLED OVER ALL WATER MAINS IS IN WORKING CONDITION AT TIME OF ACCEPTANCE BY THE CITY.
12.

ALL NEW SUBDIVISION CONSTRUCTION SHALL INSTALL DOUBLE POTABLE WATER SERVICES AT THE PROPERTY LINES.

CITY OF WINTER GARDEN - WASTEWATER SYSTEM NOTES:

1.

SANITARY SEWER MAINS AND SERVICES SHALL BE PVC SDR-26 (MINIMUM). FITTINGS SHALL BE SDR-26. DUCTILE IRON IS NOT APPROVED FOR SANITARY SEWERS.
2.

ALL SERVICES SHALL BE 6" (MINIMUM) DIAMETER AND TERMINATE AT THE PROPERTY LINE WITH 6" CLEAN OUT. (36" TO 48" DEEP AT LOT LINE)
3.

MAGNETIC TAPE MUST BE PLACED 2' ABOVE THE TOP OF PIPE FOR THE ENTIRE LENGTH OF ALL MAINS AND SERVICES.
4.

ALL SANITARY MANHOLES SHALL BE PAINTED INSIDE AND OUT WITH "BITUMASTIC SUPER SERVICE BLACK", BY KOPPERS OR APPROVED EQUAL. MANHOLES RECEIVING FLOW FROM FORCE MAINS SHALL BE LINED WITH FIBERGLASS, HOPE OR EPOXY AT THE PRECASTERS FACILITY.
5.

ALL PIPE CONNECTIONS TO PRE-CAST MANHOLES SHALL BE MADE USING A FLEXIBLE EPDM RUBBER BOOT AND STAINLESS STEEL STRAP OR CAST IN BOOT BY A-LOK, Z-LOK OR EQUAL.
6.

CONNECTIONS MADE TO EXISTING MANHOLES SHALL BE CORE BORED WITH A MINIMUM 6" BORE AND CONNECTION SEALED WITH FLEXIBLE BOOT AND STAINLESS STEEL CLAMP.
7.

DEAD END MANHOLES SHALL HAVE A MINIMUM OF 5 FEET OF COVER FROM FINISHED GRADE TO OUTLET PIPE INVERT.
8.

ALL PRECAST SEWER MANHOLES SHALL HAVE A 4 FOOT MINIMUM HIGH BARREL. CONE SECTIONS SHALL BE 3 FOOT MAXIMUM. CONCRETE DONUTS FOR EXTENDING ARE ACCEPTABLE TO RAISE MANHOLES UP TO 1 FOOT MAXIMUM.
9.

THE CONTRACTOR SHALL PROVIDE AND INSTALL BALLCENTRIC PLUG VALVES IN FORCE MAINS AT 1000 FOOT MAXIMUM SPACING BETWEEN VALVES. VALVES SHALL BE LOCATED AT ALL TEES AND CROSSES.
10.

THE CONTRACTOR SHALL CUT A "S" INTO CONCRETE CURB LOCATED INSIDE OF A PAINTED GREEN SQUARE BOX, IN FRONT OF EACH SERVICE LOCATION.
11.

THE CONTRACTOR SHALL PROVIDE TV INSPECTION OF ALL SANITARY SEWER MAINS AFTER SYSTEM IS COMPLETED, THOROUGHLY CLEANED, DRAINED AND FULLY VISIBLE. TV INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATIONS. FAULTY INSPECTION DUE TO POOR CONDITIONS WILL REQUIRE REINSPECTION BY CONTRACTOR.
12.

THE CONTRACTOR SHALL PROVIDE A (WARRANTY) TV INSPECTION AT THE TWO YEAR IN SERVICE MILESTONE FOR EACH SYSTEM.
13.

THE CONTRACTOR SHALL PROVIDE SANITARY SEWER TESTING, EXFILTRATION OR AIR, AS REQUIRED BY DESIGN ENGINEER AND SUBMIT CERTIFIED RESULTS TO THE CITY ENGINEER.
14.

GRAVITY SEWERS DEPTHS SHALL NOT EXCEED 18 FEET.
15.

THE DESIGN ENGINEER SHALL PROVIDE A MINIMUM OF ONE FOOT OF FREEBOARD BETWEEN THE LOWEST FINISHED FLOOR ELEVATION AND THE TOP ELEVATION OF THE WET WELL.
16.

ALL PENETRATIONS INTO CONCRETE STRUCTURES SHALL BE PRE-CAST OR CORE-DRILLED.
17.

WARRANTY – ALL MATERIALS & EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR SHALL BE WARRANTED FOR A PERIOD OF TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE THEREOF AGAINST DEFECTIVE MATERIALS, DESIGN, AND WORKMANSHIP. UPON RECEIPT OF NOTICE FROM THE CITY OF FAILURE OF ANY PART OF THE WARRANTED EQUIPMENT OR MATERIALS DURING THE WARRANTY PERIOD, THE AFFECTED PART, PARTS, OR MATERIALS SHALL BE PROMPTLY REPLACED BY THE CONTRACTOR WITH NEW PARTS OR MATERIALS AT NO EXPENSE TO THE CITY. IN THE EVENT THE CONTRACTOR FAILS TO MAKE THE NECESSARY REPLACEMENT OR REPAIRS IMMEDIATELY AFTER NOTIFICATION, THE CITY MAY ACCOMPLISH THE WORK AT THE EXPENSE OF THE CONTRACTOR.

CITY OF WINTER GARDEN - RECLAIMED WATER SYSTEM NOTES:

1.

ALL PRIVATE RECLAIMED WATER SYSTEMS SHALL HAVE A CITY APPROVED BACKFLOW DEVICE ASSEMBLY AT EACH CONNECTION POINT WHEN CONNECTED TO THE CITY POTABLE WATER SYSTEM.
2.

ALL MAINS AND SERVICE LATERALS SHALL BE HYDROSTATICALLY TESTED AT 150 PSI FOR A TWO HOUR PERIOD.
3.

WARNING TAPE, NON-DETECTABLE, SIZE 3" WITH "REUSE WATER LINE BELOW", MUST BE PLACED 8" TO 12" BELOW FINISHED GRADE ON ALL PVC WATER MAINS, LATERALS AND HEADER TEES, NUMBER 10 GAUGE TRACER WIRE SHALL BE ATTACHED TO THE TOP OF THE PIPE WITH DUCT TAPE, AT LEAST FIVE TIMES PER JOINT. THE TRACER WIRE SHALL ALSO BE ATTACHED TO ALL PVC LATERALS AND ATTACHED TO THE OUTSIDE OF EACH VALVE BOX SO THAT A PIPE LOCATOR CAN BE CONNECTED TO IT. THE CONTRACTOR SHALL DEMONSTRATE THE LOCATE WIRE TO BE IN WORKING CONDITION AT PROJECT COMPLETION.
4.

THE CONTRACTOR SHALL INSTALL RECLAIMED WATER MAINS PER MSS/CWG. SOLVENT CEMENTED JOINTS AND THRUST BLOCKS SHALL NOT BE ALLOWED.
5.

REUSE WATER MAIN SHALL BE BURIED TO A MINIMUM DEPTH OF 36" AND A MAXIMUM DEPTH 42" BELOW FINAL GRADE.
6.

SERVICE LATERALS MUST BE LOCATED A UNIFORM DISTANCE APART AND ALIGNED TO PROPERTY LOT LINE AT 90° FROM THE RECLAIMED WATERMAIN.
7.

CUSTOMER SERVICE LATERALS SHALL NOT BE SPUJED TOGETHER BETWEEN THE WATER MAIN AND CURB STOP.
8.

THE CONTRACTOR SHALL CUT CURB A "R" INTO CONCRETE CURB LOCATED INSIDE OF A PAINTED SQUARE (PURPLE), DIRECTLY IN FRONT OF EACH SERVICE LATERAL AND VALVE.
9.

THE CONTRACTOR SHALL SET DEPTH OF CURB STOP, IN METER BOX, 8" BELOW FINISHED GRADE.
10.

THE CONTRACTOR SHALL INSTALL VALVE(S) IN MAIN, NO MORE THAN 1,000 FEET APART IN BETWEEN TEES AND CROSSES. VALVES SHALL BE PROVIDED AT EACH TEE OR CROSS LOCATED IN MAIN LINE.
11.

RECLAIMED WATER MAINS MAY BE LOCATED UNDER SIDEWALKS. RECLAIMED MAINS LOCATED UNDER PAVEMENT SHOULD BE MINIMIZED.
12.

ALL WATERMAINS SHALL BE CLEANED BY PIGGING THE LINE WITH A FOAM PIG (MINIMUM OF 2 IN SERIES, 1 FLUSH). A FULL BORE FLUSH MAY BE REQUIRED AFTER PIGGING TO ENSURE THE PIPE IS CLEAN AND READY FOR SERVICE. THE CONTRACTOR SHALL COORDINATE LINE PIGGING AND FULL BORE FLUSH WITH THE CITY INSPECTOR.
13.

RECLAIMED WATERMAIN MAINS SHALL BE 8 INCH DIAMETER MINIMUM, 4 INCH IS ALLOWED ON DEAD END RUNS SERVING LESS THAN 20 HOMES. THE DESIGN ENGINEER SHALL SUBMIT HYDRAULIC CALCULATIONS THAT DEMONSTRATE THE PROPOSED SYSTEM WILL PROVIDE REQUIRED FLOWS AND MAINTAIN SYSTEM ABOVE MINIMUM PRESSURE. PEAK IRRIGATION RATE SHALL BE SIX(6) TIMES GREATER THAN THE AVERAGE IRRIGATION RATE OF FLOW.
14.

RECLAIMED WATER SYSTEM COMPONENTS INCLUDING PIPE, VALVE BOX TOPS AND METER BOX TOPS SHALL BE RECLAIMED PURPLE IN COLOR.

CLOSED CIRCUIT TELEVISION (CCTV) INSPECTION OF SEWER LINES

GENERAL:

1.

ALL NEW SANITARY SEWER LINES, PRIVATE OR CITY MAINTAINED, IN THE CITY OF WINTER GARDEN'S SERVICE AREA SHALL BE INSPECTED BY CLOSED CIRCUIT TV INSPECTION BY THE CONTRACTOR WITH A CITY INSPECTOR PRESENT PRIOR TO BEING ACCEPTED BY THE CITY.

REQUIREMENTS PRIOR TO INSPECTION RELEASE:

1.

ALL ELEMENTS OF THE SEWER SYSTEM MUST BE INSTALLED AND BE COMPLETELY FINISHED. INCLUDING MAIN SEWER LINES, LATERALS, CLEAN OUTS, AND MANHOLES PRIOR TO CCTV INSPECTION.
2.

ALL SEWER LINES SHALL BE COMPLETELY CLEANED OF ALL DEBRIS, SAND, WATER, ETC. PRIOR TO THE CCTV INSPECTION. ANY OBJECT OR MATTER THAT PREVENTS CCTV INSPECTION FROM VIEWING CONDITION OF PIPELINE IS CONSIDERED AN OBSTRUCTION REQUIRING ADDITIONAL CLEANING. WHEN CCTV VIEW IS OBSTRUCTED, INSPECTION SHALL BE TERMINATED. THE CONTRACTOR SHALL CLEAN THE SEWER SYSTEM COMPLETELY AND RESCHEDULE CCTV RE-INSPECTION WITH THE CITY.
3.

A HYDRAULIC SEWER CLEANER SHALL NOT BE USED DURING THE CCTV INSPECTION. IF LINES ARE FOUND TO BE OBTSCURED BY WATER OR DEBRIS DURING THE CCTV INSPECTION, THE INSPECTION SHALL BE TERMINATED AND RESCHEDULED TO A TIME WHEN SEWER CLEANING IS COMPLETE.
4.

WHEN A SEWER LINE IS UNDER A PAVED AREA, THE AREA SHALL BE COMPACTED AND PRIMED BEFORE THE SYSTEM SHALL BE RELEASED FOR TV INSPECTION.

TELEVISION EQUIPMENT MINIMUM REQUIREMENTS:

1.

THE CLOSED CIRCUIT TV CAMERA SHALL PRODUCE A CLEAR COLOR PICTURE ON THE MONITOR AND ON THE DVD RECORDING. THE CAMERA SHALL BE ABLE TO SHOW DETAIL TO THE POINT THAT ALL JOINTS AND ANY DEFECTS MAY BE READLY SEEN AT THE TIME OF THE INSPECTION. THE CAMERA SHALL STOP AND PAN AT EACH JOINT FOR COMPLETE 360 DEGREE INSPECTION.
2.

REFER TO APPENDIX B OF THE REFERENCED STANDARDS FOR SPECIFICATION OF CLOSED CIRCUIT TELEVISION INSPECTION EQUIPMENT.
3.

THE VIDEO RECORDER SHALL PRODUCE A NO NOISE STILL PICTURE, AND PROVIDE BOTH AUDIO AND VIDEO DURING THE INSPECTION.
4.

A MEASURING DEVICE, APPROVED BY THE CITY, TO CHECK THE GRADE OF THE PIPE DURING THE INSPECTION, SHALL BE REQUIRED. GAUGE DEPTH, 0" TO 2" MIN. WITH 1/2" MARKINGS.
5.

AUDIO OF THE INSPECTION SHALL BE SIMULTANEOUSLY RECORDED ON DVD DISC. THE AUDIO SHALL CONSIST OF ORDINARY DESCRIPTION AND COMMENTARY. A TAPE WILL BE GIVEN TO THE INSPECTOR ON SITE AT THE END OF THE DAY.

PROCEDURE FOR TELEVISIONING:

1.

THE CITY'S ENGINEERING INSPECTION DIVISION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS NOTICE PRIOR TO THE TIME PLANNED FOR THE TV INSPECTION TO COMMENCE. A DEFINITE TIME AND DATE WILL BE AGREED UPON BY THE CONTRACTOR AND INSPECTOR AT THAT TIME.
2.

NO INSPECTION SHALL COMMENCE WITHOUT THE PRESENCE OF THE INSPECTOR, EXCEPT WHEN PRIOR ARRANGEMENTS HAVE BEEN MADE BETWEEN THE CONTRACTOR, INSPECTOR, AND THE CITY. TV INSPECTION SHALL BE PERFORMED BY THE CONTRACTOR AT THE EXPENSE OF THE CONTRACTOR.
3.

ALL CCTV INSPECTIONS SHALL COMMENCE UP STREAM OF THE SYSTEM TO PREVENT FOREIGN SUBSTANCES FROM ENTERING A SECTION PREVIOUSLY TELEVIEWED. THE CAMERA SHALL BE STARTED FROM THE DOWNSTREAM MANHOLE AND PROCEED UPSTREAM IN DIRECTION OPPOSING THE NORMAL FLOW IN THE LINE. THIS PROCEDURE WILL ALLOW FOR THE VIEWING OF THE SERVICE LATERALS.
4.

BEFORE THE CAMERA IS PLACED IN THE SEWER LINE, WATER WITH YELLOW OR ORANGE DYE SHALL BE PUT INTO THE UPSTREAM MANHOLE OF THE SECTION BEING TELEVIEWED. CAMERA WILL HAVE A GAUGE SHOWING 1/2" MARKS FROM 1/2" TO 2-1/2". THIS WILL ENABLE THE CAMERA TO DETECT ANY CHANGES IN GRADE THAT MAY BE PRESENT IN THE SYSTEM.
5.

THE CCTV AND DVD RECORDER SHALL BE TURNED ON BEFORE THE CAMERA IS PLACED IN THE MANHOLE FOR INSPECTION AND SHALL NOT BE TURNED OFF UNTIL THE CAMERA IS REMOVED FROM THE MANHOLE. THE CAMERA SHALL BE MOVED THROUGH THE LINE UNDER THE CONTROL OF THE CCTV CAMERA OPERATOR. THE CAMERA SHALL BE DRAWN THROUGH THE LINE AT A RATE NOT TO EXCEED THIRTY (30) FEET PER MINUTE AND SHALL STOP AT ALL SERVICE CONNECTIONS AND JOINT POINTS IN THE PIPELINE.
6.

A DVD RECORDING SHALL BE MADE OF THE ENTIRE SYSTEM BEING TELEVIEWED. THIS SHALL BECOME THE PROPERTY OF THE CITY UPON COMPLETION OF THE TV INSPECTION (NOT A COPY). THE TAPE(S) SHALL BE LABELED IN SUCH A MANNER THAT STATES THE PROJECT NAME, DATE OF INSPECTION AND LINE SECTION ACCORDING TO CONSTRUCTION PLANS CONTAINED ON EACH TAPE. A WRITTEN REPORT SHALL ACCOMPANY THE DVD DISC.

CITY OF WINTER GARDEN - TRUST RESTRAINT TABLE

RESTRAINED FORCE MAIN PIPE TABLE									
MINIMUM LENGTH(FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S)									
	PIPE SIZE								
	6"	8"	10"	12"	16"	20"	24"	30"	36"
90° BEND	19	25	30	34	44	52	60	70	80
45° BEND	8	10	12	14	18	21	25	30	34
22-1/2° BEND	4	5	6	7	9	10	12	14	16
11-1/4° BEND	2	3	4	5	6	7	8	9	10
PLUG, DEAD END OR BRANCH OF TEE	40	52	63	72	93	111	130	155	178
VALVE	20	25	32	36	47	56	78	116	89

RESTRAINED WATER AND RECLAIMED PIPE TABLE									
MINIMUM LENGTH(FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S)									
	PIPE SIZE								
	6"	8"	10"	12"	16"	20"	24"	30"	36"
90° BEND	29	37	44	51	65	77	89	105	120
45° BEND	12	15	18	21	27	32	37	44	50
22-1/2° BEND	6	7	9	10	13	15	18	21	24
11-1/4° BEND	3	4	5	6	7	8	9	10	12
PLUG, DEAD END OR BRANCH OF TEE	59	77	93	108	138	166	194	231	265
VALVE	59	77	93	108	138	166	194	231	265

HORIZONTAL & VERTICAL SEPARATION REQUIREMENTS									
PROPOSED UTILITY	POTABLE WATER		RECLAIMED WATER*		SANITARY SEWER (GRAVITY)		SANITARY SEWER (FORCEMAIN)		ACCEPTABLE VARIANCES
	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	HORIZ.	VERT.	
POTABLE WATER	—	—	3'	12"	6'	12"	6'	12"	SEE GENERAL NOTES: NO. 4 & 5
RECLAIMED WATER*	3'	12"	—	—	3'	12"	3'	12"	
SANITARY SEWER (GRAVITY)	6'	12"	3'	12"	—	—	—	—	
SANITARY SEWER (FORCEMAIN)	6'	12"	3'	12"	—	—	—	—	

GENERAL NOTES:

1.

THE TABLE REPRESENTS THE MINIMUM SEPARATION REQUIREMENTS AS DESCRIBED IN F.D.E.P. RULES OF THE FLORIDA ADMINISTRATION CODE (F.A.C.). THESE SEPARATION REQUIREMENTS SHALL APPLY BETWEEN NEWLY PROPOSED UTILITY LINES AND EXISTING OR PROPOSED UTILITY LINES AND EXISTING OR PROPOSED UTILITY LINES.
- *2.

FOR THE PURPOSE OF THIS TABLE, RECLAIMED WATER SHALL MEAN UNRESTRICTED PUBLIC ACCESS REUSE WATER AS DEFINED BY F.A.C. 162-610, CHAPTER III. OTHER TYPES OF RECLAIMED WATER ARE CONSIDERED RAW SEWAGE AND SEPARATIONS LISTED FOR SANITARY SEWER SHALL APPLY.
3.

ALL SEPARATION DISTANCES ARE FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE UNLESS OTHERWISE SPECIFIED. CRITERION PRODUCING GREATER CLEARANCE SHALL BE USED.
- A.

DENOTES POTABLE WATER ABOVE RECLAIMED WATER, SANITARY SEWER OR STORM WATER; OR RECLAIMED WATER ABOVE SANITARY SEWER.
- B.

DENOTES POTABLE WATER BELOW RECLAIMED WATER, SANITARY SEWER OR STORM WATER; OR RECLAIMED WATER BELOW SANITARY SEWER.
4.

UTILITY SEPARATION – VERTICAL CLEARANCE MITIGATION
- A.

WHERE WATER AND GRAVITY SANITARY SEWER MAINS CROSS WITH LESS THAN REQUIRED VERTICAL CLEARANCE OR THE SEWER MAIN IS ABOVE THE WATER MAIN, THE SANITARY SEWER WILL BE 20 FEET OF EITHER:
- A.1.

DUCTILE IRON PIPE, CENTERED ON THE POINT OF CROSSING, OR;
- A.2.

CONCRETE ENCASED VITRIFIED CLAY, OR;
- A.3.

PVC PIPE UPGRADED TO WATER MAIN STANDARDS AND PRESSURE TESTED.
- B.

WHERE WATER MAINS AND STORM SEWER PIPES CROSS WITH LESS THAN REQUIRED VERTICAL CLEARANCE, THE WATER MAIN SHALL BE 20 FEET OF DUCTILE IRON PIPE CENTERED ON THE POINT OF CROSSING.
- C.

SEPARATION REQUIREMENTS BETWEEN FORCE MAINS AND POTABLE WATER MAINS MUST BE MAINTAINED UNLESS APPROVED IN ADVANCE BY THE DEPARTMENT.
5.

UTILITY SEPARATION – HORIZONTAL SEPARATION MITIGATION
- A.

WHEN A WATER MAIN PARALLELS A GRAVITY SANITARY SEWER MAIN, A SEPARATION (MEASURED EDGE TO EDGE) OF AT LEAST SIX FEET SHOULD BE MAINTAINED. WHERE THIS SEPARATION IS NOT MET, ONE OF THE FOLLOWING MUST OCCUR.
- A.1.

THE WATER MAIN IS LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE SIDE OF THE SEWER AT SUCH AN ELEVATION THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 6 INCHES ABOVE THE TOP OF THE SEWER, OR;
- A.2.

IF BOTH SANITARY SEWER AND POTABLE WATER MAINS ARE PROPOSED AND THE ABOVE (1.) IS NOT MET, THE SANITARY SEWER PIPES SHALL BE UPGRADED TO THE EQUIVALENT PIPE MATERIAL AS THE WATER MAIN AND PRESSURE TESTED.
- A.3.

IF THE SANITARY SEWER IS EXISTING AND THE POTABLE WATER MAIN IS PROPOSED, THE WATER MAIN SHALL, AT A MINIMUM, BE UPGRADED TO DUCTILE IRON PIPE, CONSTRUCTED IN SEPARATE TRENCHES, LAID AT A HIGHER ELEVATION THAN THE SANITARY SEWER, AND UTILIZE STAGGERED JOINTS.
- B.

SEPARATION REQUIREMENTS BETWEEN FORCE MAINS AND POTABLE WATER MAINS MUST BE MAINTAINED UNLESS APPROVED IN ADVANCE BY THE DEPARTMENT.
6.

NO WATER PIPE SHALL PASS THROUGH OR COME IN CONTACT WITH ANY PART OF A SANITARY OR STORM WATER MANHOLE OR STRUCTURE.

THRUST RESTRAINT NOTES:

1.

THE TABLES INDICATE MINIMUM LENGTHS OF RESTRAINED JOINTS ON EACH SIDE OF FITTINGS AND CHANGES IN DIRECTION. WHERE PRACTICAL, FULL LENGTHS OF RESTRAINED PIPE SHALL BE LAID TO ACHIEVE THE REQUIRED MINIMUM RESTRAINT.
2.

WHERE COMBINATIONS OF FITTINGS ARE USED, THE PIPING BETWEEN THE FITTINGS SHALL BE RESTRAINED. THE MINIMUM RESTRAINED LENGTH OF PIPE REQUIRED UPSTREAM AND DOWNSTREAM OF THE COMBINATION OF FITTINGS SHALL BE DETERMINED ON THE BASIS OF ONE EQUIVALENT FITTING (I.E., 2-45 DEGREE BENDS WILL BE CONSIDERED AS THOUGH A 90° BEND WERE LOCATED MIDWAY BETWEEN THE TWO 45° BENDS).
3.

FOR PIPE THAT IS ENCASED IN POLYETHYLENE, RESTRAINED JOINTS MINIMUM LENGTHS SHALL BE INCREASED BY 50 PERCENT.
4.

FOR FITTINGS OTHER THAN THOSE PRESENTED IN THE ABOVE TABLES, RESTRAINED JOINT LENGTHS SHALL BE DETERMINED IN ACCORDANCE WITH "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" BY THE DUCTILE IRON PIPE RESEARCH ASSOCIATION. RESTRAINED JOINT LENGTHS FOR A GIVEN PRESSURE RANGE SHALL BE BASED ON THE MAXIMUM PRESSURE FOR THE TEST PRESSURE RANGE, SM (SAND SILT) SOIL, 3- FEET DEPTH, LAYING CONDITION NO. 3 AND FACTOR OF SAFETY OF 1.5.
5.

IN-LINE VALVES: PROVIDE MECHANICAL RESTRAINT ON EACH SIDE OF THE VALVE.
6.

ALL RECLAIMED WATER PIPING SHALL BE HYDROSTATICALLY TESTED AT A PRESSURE OF 150 PSI. ALL WASTEWATER PIPING SHALL BE HYDROSTATICALLY TESTED AT A PRESSURE OF 100 PSI.

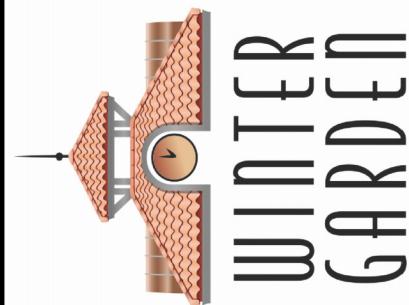
WINTER GARDEN STANDARDS INCORPORATED WITH DESIGN ENGINEERS DOCUMENTS:

THE DETAILS, NOTES AND SPECIFICATIONS SHOWN ON THIS SHEET REPRESENT THE NOTED STANDARDS OF THE CITY OF WINTER GARDEN FOR CONSTRUCTION OF PUBLIC WORKS AND UTILITY INFRASTRUCTURE. BY INCLUDING THE STANDARDS, THE DESIGN ENGINEER HAS ACKNOWLEDGED THAT THEY ARE EFFECTIVE TO THE PROJECT AND THAT DETAILS, NOTES, OR SPECIFICATIONS ARE AS PROVIDED BY THE CITY AND HAVE NOT BEEN REVISED OR MODIFIED WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER OR UTILITY DIRECTOR.

CITY OF WINTER GARDEN, FLORIDA

STANDARDS AND SPECIFICATIONS

FOR UTILITY CONSTRUCTION



STANDARD DETAILS

FOR

UTILITY SYSTEMS

DATE
JANUARY 2024
SHEET

1

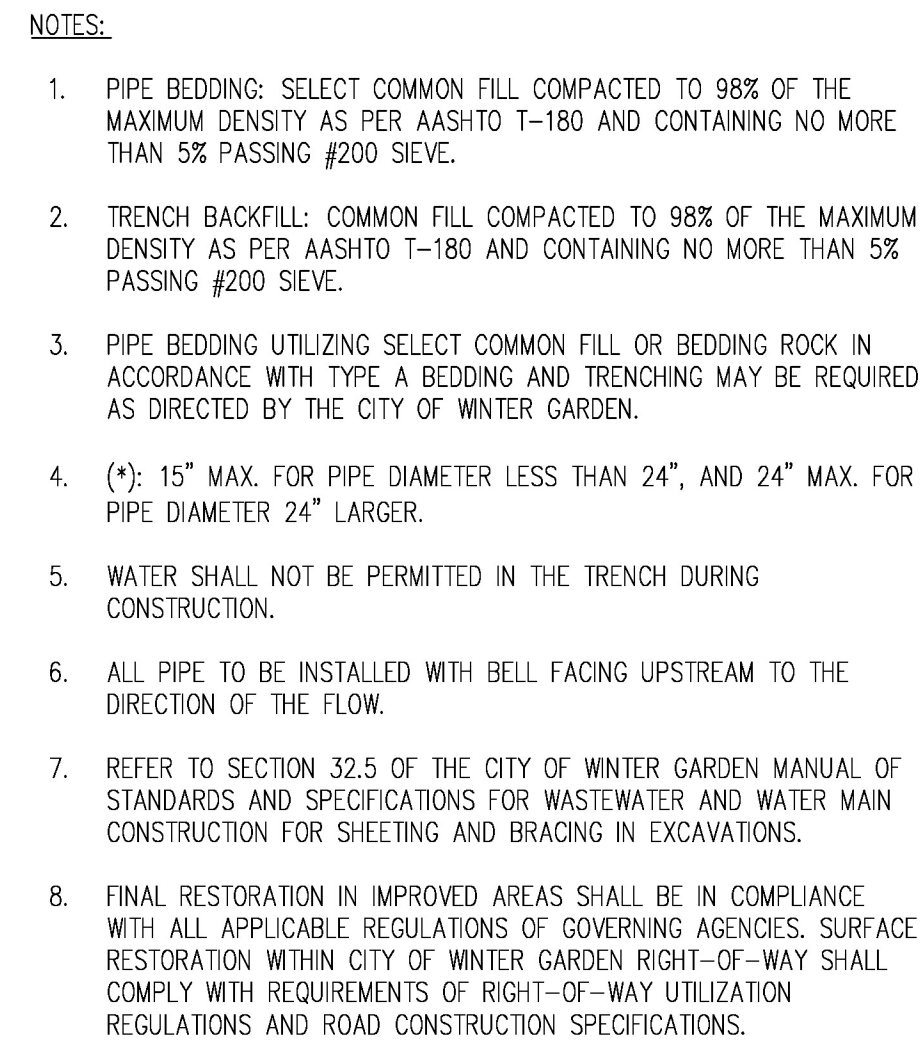
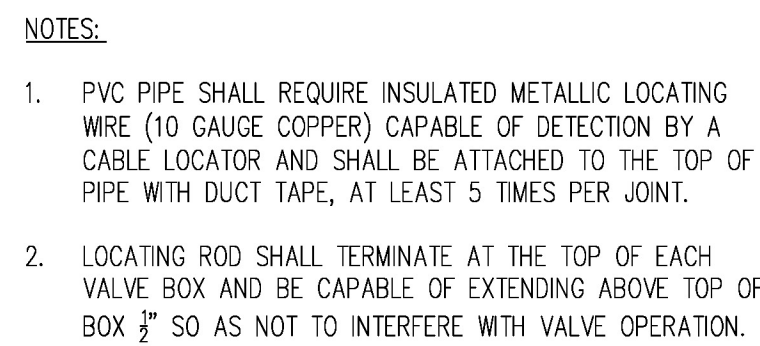


Diagram illustrating the installation of a double meter box (18" x 24" MIN.) showing the connection to a 2" 90° bend, restrained joint ductile iron water main, and the 6" bedding rock. The diagram also shows a 2" 90° bend and a brass nipple with a tapped cap. The note specifies that all 2" pipe and fittings shall be brass with threaded (NPT) joints.

1. THE CONTRACTOR SHALL CONTACT THE INSPECTOR FOR EXACT ASSEMBLY LENGTH AND HEIGHT ABOVE THE SLAB REQUIRED FOR THE FIRE LINE MASTER METER TO BE INSTALLED. ALL WIRE, FITTINGS AND APPURTENANCES SHALL BE INSTALLED BY THE CONTRACTOR.

2. ALL PIPE LARGER THAN 2 INCH SHALL BE FLANGED DUCTILE IRON PIPE

1. THE CONTRACTOR SHALL CONTACT THE INSPECTOR FOR EXACT ASSEMBLY LENGTH AND HEIGHT ABOVE THE SLAB REQUIRED FOR THE FIRE LINE MASTER METER TO BE INSTALLED. ALL WIRE, FITTINGS AND APPURTENANCES SHALL BE INSTALLED BY THE CONTRACTOR.
2. ALL PIPE LARGER THAN 2 INCH SHALL BE FLANGED DUCTILE IRON PIPE.
3. SENSUS METER REQUIRED.
4. 2" BYPASS METER SHALL BE CONSTRUCTED ON ALL MASTER METER ASSEMBLIES THREE INCHES AND LARGER.



DOUBLE CHECK VALVE BACKFLOW PREVENTER INSTALLED BY THE CONTRACTOR

O.S. & Y. VALVE (4 REQUIRED)

90° FLANGED BEND

4" MAX.

4' x 4' PRECAST CONCRETE WALL

36" SQ.

17 1/2"

2" NIPPLE

FITTINGS AND PIPE FOR A.R.V. SHALL BE BRASS

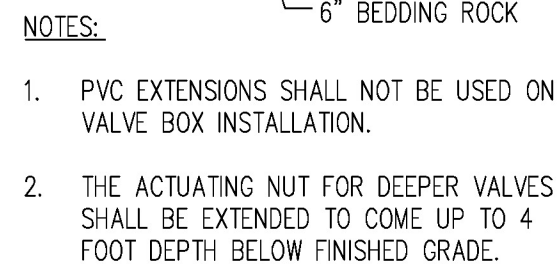
PREFORMED PLASTIC JOINT FILLER

5" WALLS (MIN.)

SERVICE SADDLE PER SPECIFICATION

NOTES:

1. THE MINIMUM DIMENSION FROM TOP OF PIPE TO FINISHED GRADE SHALL BE 3.0 FEET.
2. DOUBLE STRAP SADDLE AND WRAP WITH TWO LAYERS OF WIDE PLASTIC OR POLY TAPE WITH STAINLESS STEEL STRAP.
3. PIPE INSTALLATION SHALL BE SUCH THAT THE A.R.V. IS LOCATED AT THE HIGHEST POINT IN THE RESPECTIVE SEGMENT.
4. INTERIOR AND EXTERIOR CONCRETE SURFACES SHALL RECEIVE PROTECTIVE COATING AS SPECIFIED FOR VALVE VAULTS.
5. CAST IRON FRAME, COVER AND ACCESS LID SHALL BE INSTALLED FLUSH WITH FINISHED GRADE.
6. COVER SHALL READ "WINTER GARDEN UTILITIES DIVISION AND "POTABLE WATER".
7. NO GALVANIZED PIPE/VALVES.



CAST IRON FRAME AND COVER WITH ACCESS LID
US FOUNDRY MODEL #7665 OR EQUIVALENT

ROUT

IED GRADE

SEE APPROVED MATERIAL LIST FOR MANUFACTURERS

" BALL VALVE

EE NOTE 2

"8"x16" REINFORCED CONCRETE FOOTING

PRECAST CONCRETE

4' MAX.

4' x

CONCRETE

PREMOLDED PLASTIC JOINT FILLER

SEE APPROVED MATERIAL LIST FOR MANUFACTURERS

2" NIPPLE

2" 90° BEND

"8"x16" REINFORCED CONCRETE FOOTING

FITTINGS AND PIPE FOR A.R.V. SHALL BE BRASS

NOTES:

1. THE MINIMUM DIMENSION FROM TOP OF PIPE TO FINISHED GRADE SHALL BE 4.0 FEET.
2. DOUBLE STRAP SADDLE AND WRAP WITH TWO LAYERS OF WIDE PLASTIC OR POLY TAPE WITH STAINLESS STEEL STRAP.
3. PIPE INSTALLATION SHALL BE SUCH THAT THE A.R.V. IS LOCATED AT THE HIGHEST POINT IN THE RESPECTIVE SEGMENT.
4. INTERIOR AND EXTERIOR CONCRETE SURFACES SHALL RECEIVE PROTECTIVE COATING AS SPECIFIED FOR VALVE VAULTS.
5. CAST IRON FRAME, COVER AND ACCESS LID SHALL BE INSTALLED FLUSH WITH FINISHED GRADE.
6. COVER SHALL READ "WINTER GARDEN UTILITIES DIVISION, "SEWER" "RECLAIMED WATER OR POTABLE WATER".
7. NO GALVANIZED PIPE/VALVES.
8. LOCATE WIRE IN THE ARV VAULT SHALL BE SPLICED TO THE WIRE RUNNING WITH THE WATER MAIN AND EXCESS WIRE TO BE PLACED IN ARV VAULT. THE POINT OF CONNECTION AT THE MAIN SHALL HAVE A WATER PROOF CONNECTOR.

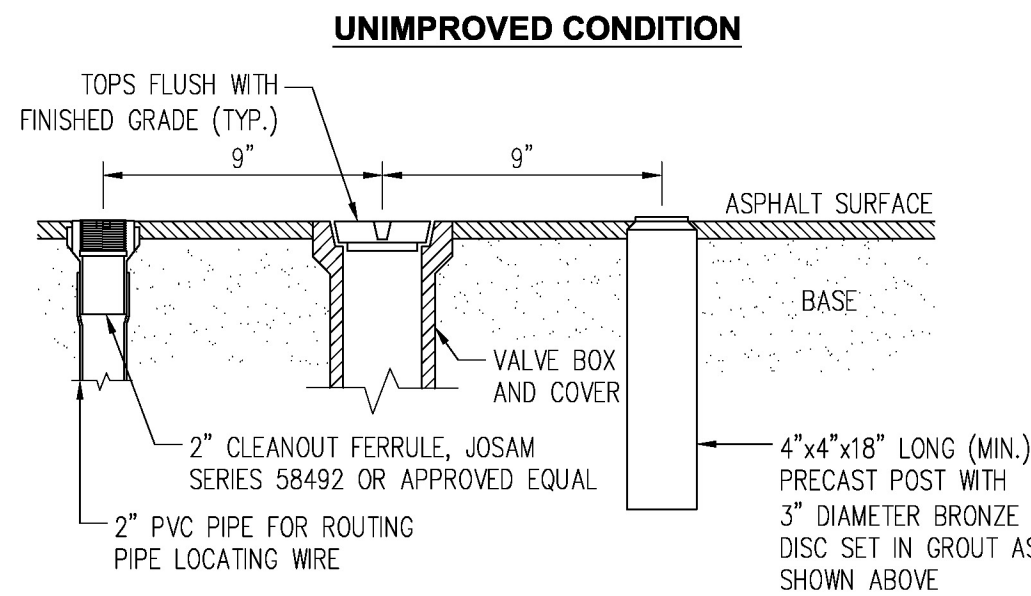
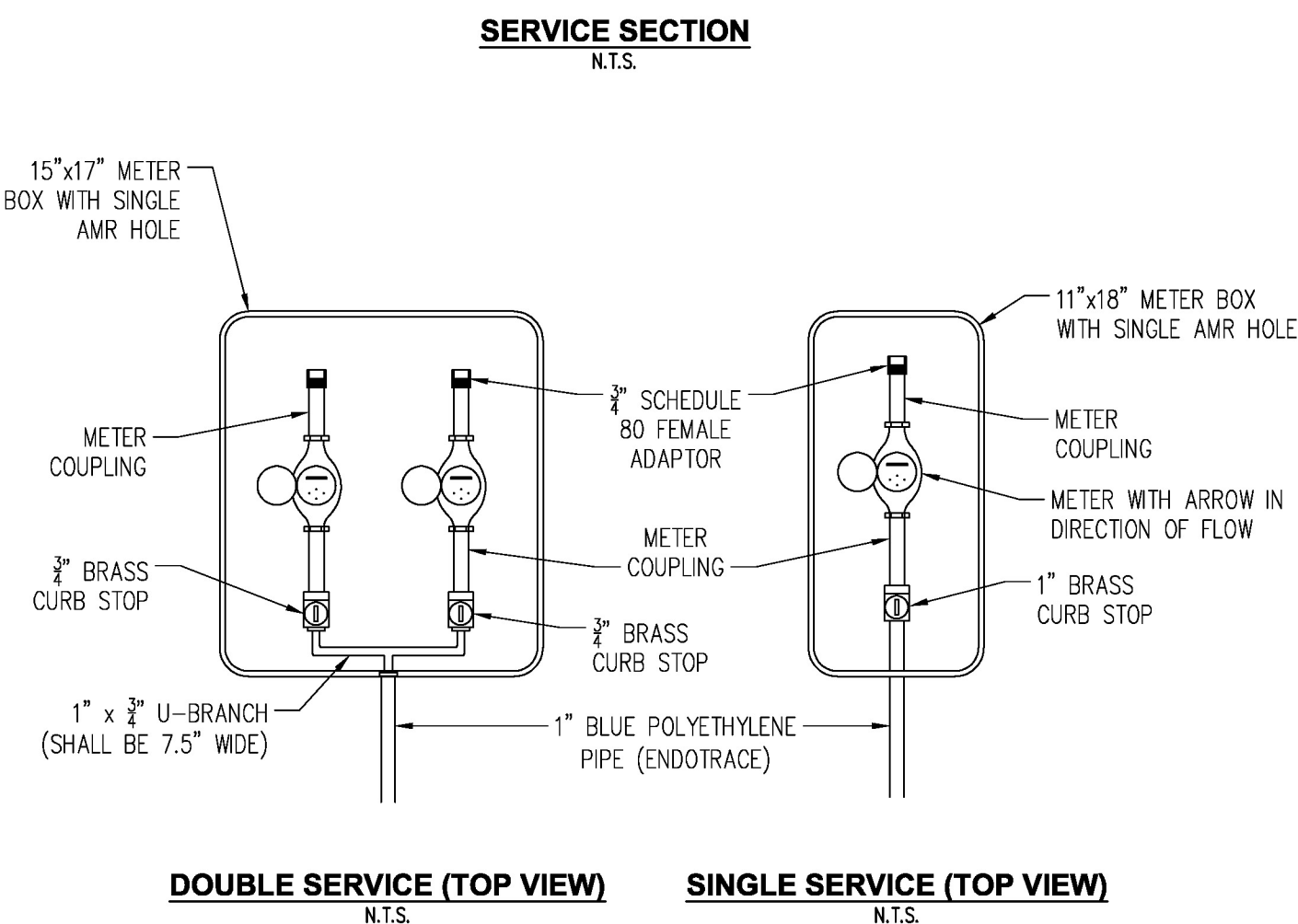


Diagram illustrating the components of a valve assembly:

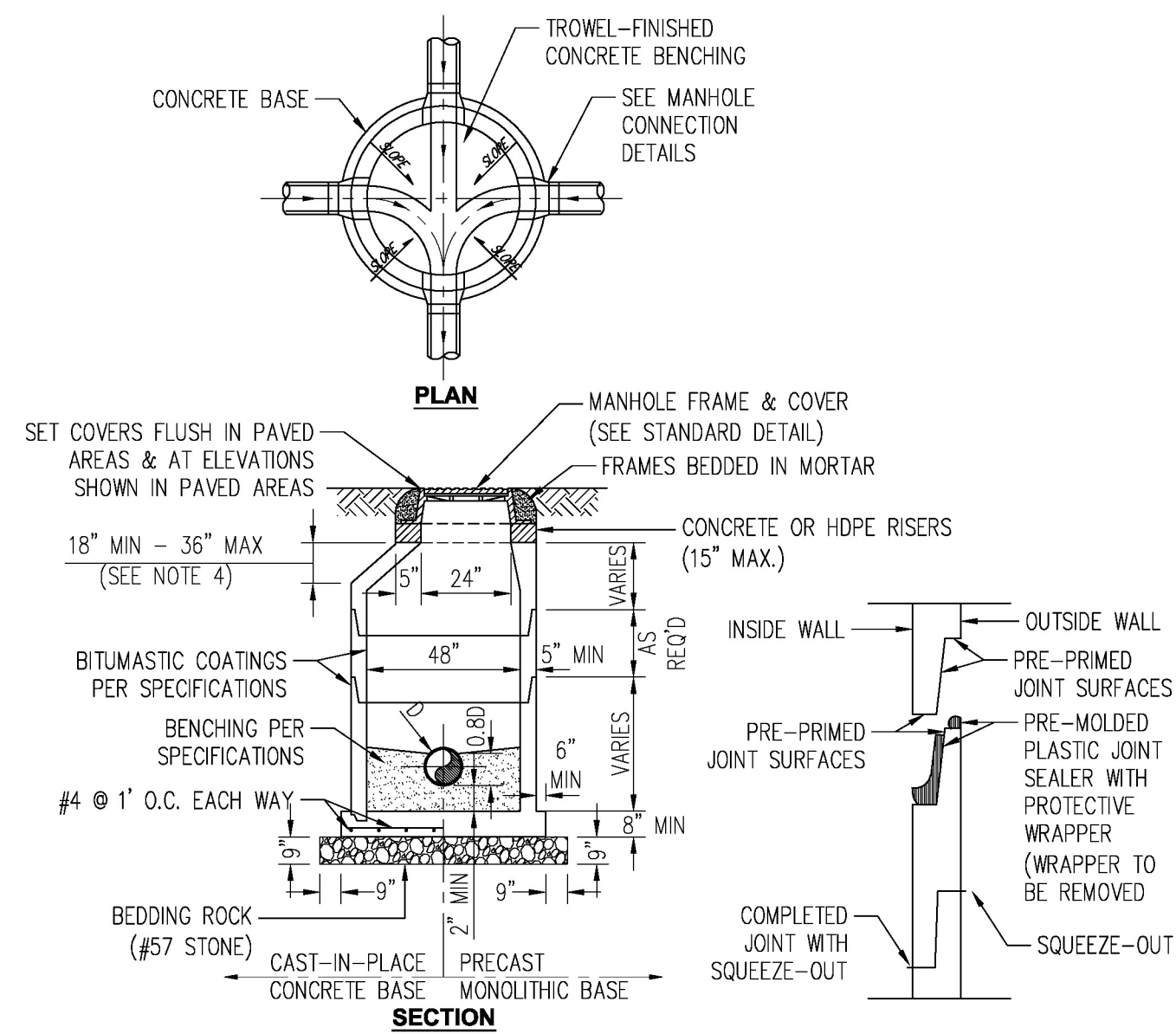
- SEE VALVE COLLAR (TYP.)
- VALVE BOX
- MJ VALVE
- MJ HYDRA
- WATER MAIN
- QUAL

NOTES:

1. ALL PIPE AND FITTINGS 2" AND SMALLER SHALL BE THREADED SCHEDULE 80 PVC. NO GALVANIZED PIPE WILL BE APPROVED.
2. ALL PIPE LARGER THAN 2" SHALL BE FLANGED DUCTILE IRON PIPE.
3. NO GALVANIZED PIPE ALLOWED.



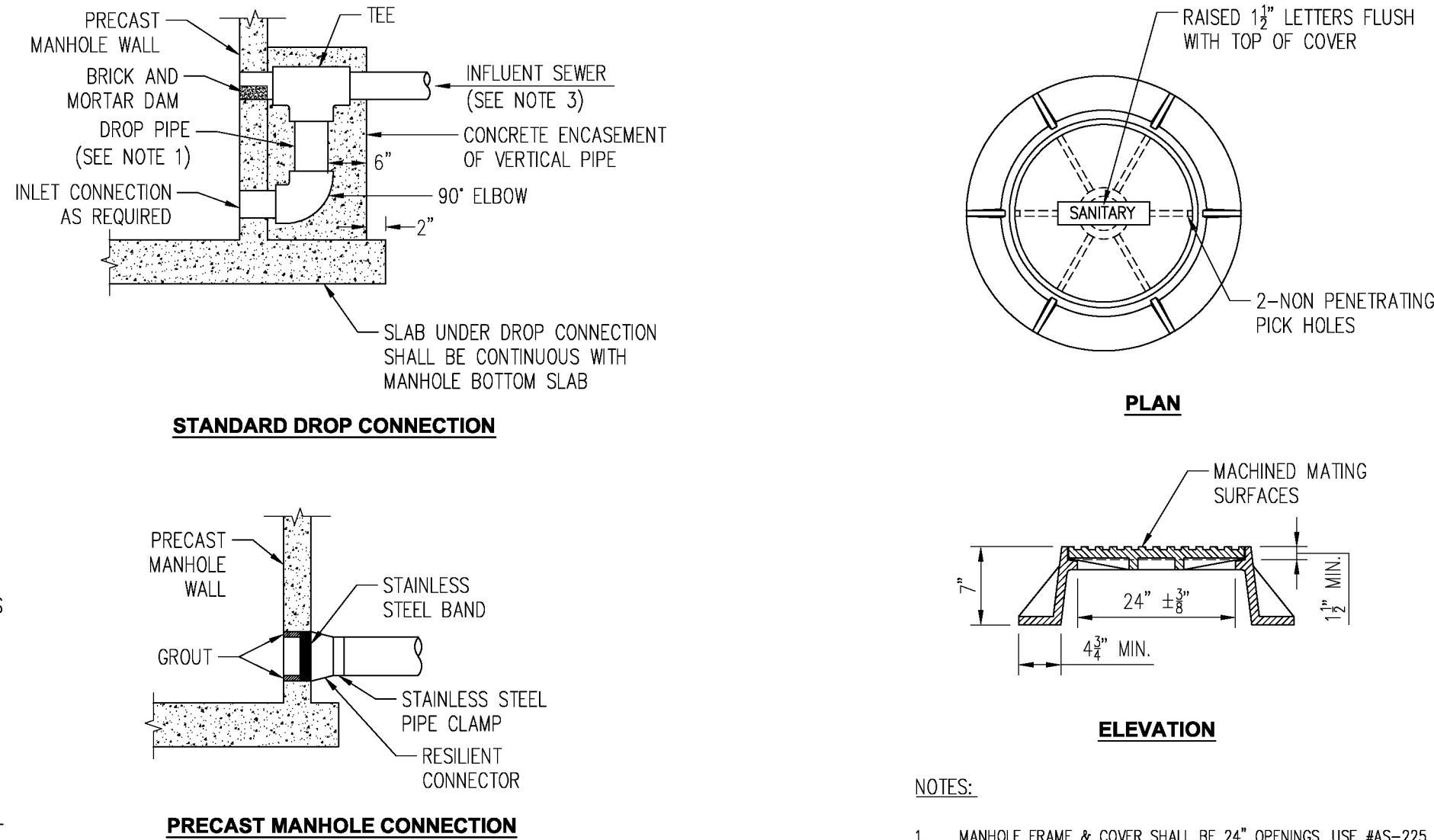
CITY OF WINTER GARDEN, FLORIDA



NOTES:

1. DROP CONNECTIONS ARE REQUIRED WHENEVER INVERT OF INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE. SEE MANHOLE CONNECTION DETAILS. ALL DROPS TO BE OUTSIDE OF THE MANHOLE.
2. E-Z RAPP OUTSIDE ALL JOINTS
3. GROUT WITH NON-SHRINKING GROUT INSIDE JOINTS
4. NO CONES OVER 3 FT. TALL
5. ALL PRECAST CONCRETE SHALL BE COATED INSIDE AND OUTSIDE WITH COAL TAR EPOXY, MINIMUM 16 MIL DMT.

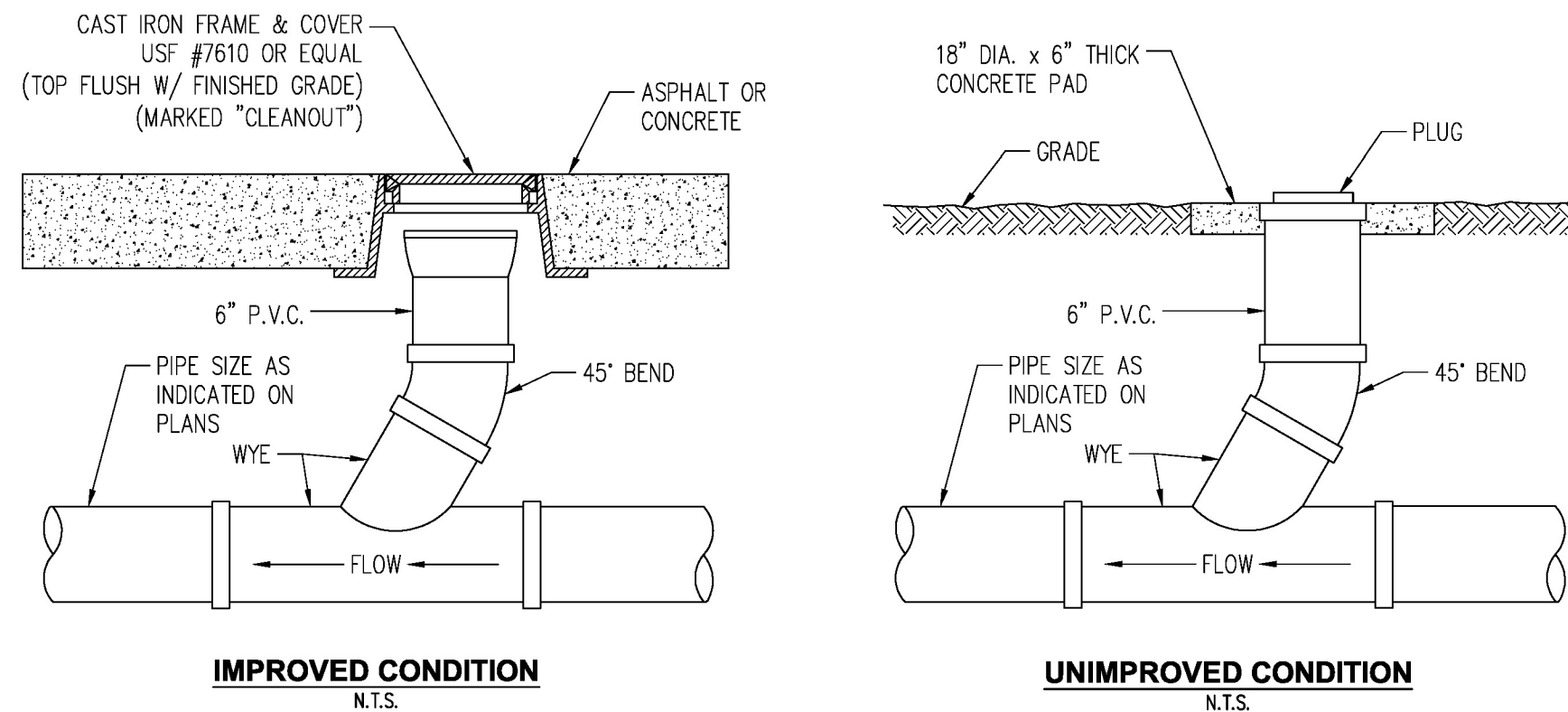
1 PRECAST CONCRETE SANITARY MANHOLE
N.T.S.



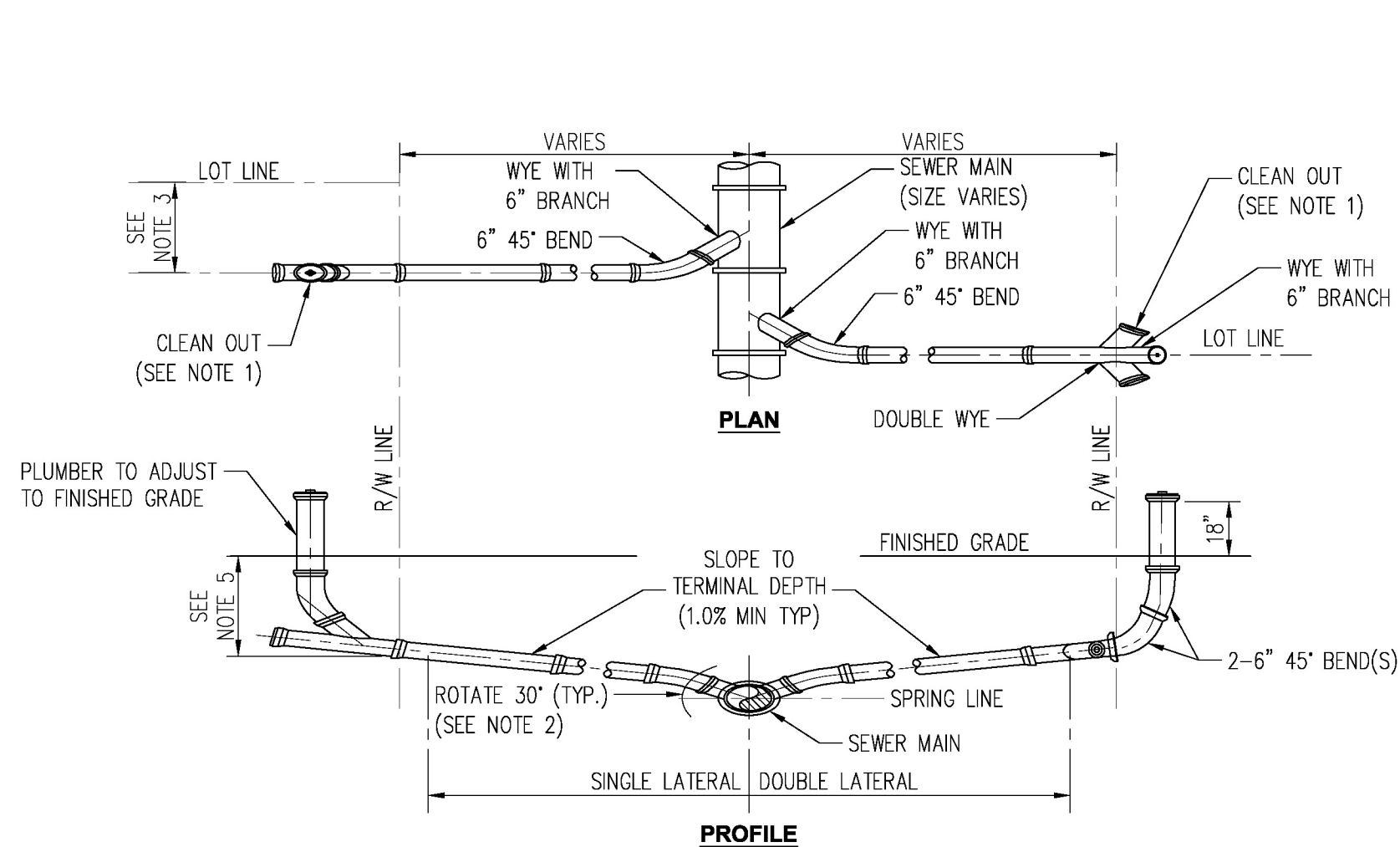
NOTES:

1. DROP PIPE AND FITTINGS SHALL BE OF EQUAL SIZE AND MATERIAL AS THE INFLUENT SEWER.
2. AN OUTSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT WHICH HAVE AN INVERT 2' OR MORE ABOVE THEN MANHOLE INVERT.

2 MANHOLE CONNECTION DETAIL
N.T.S.



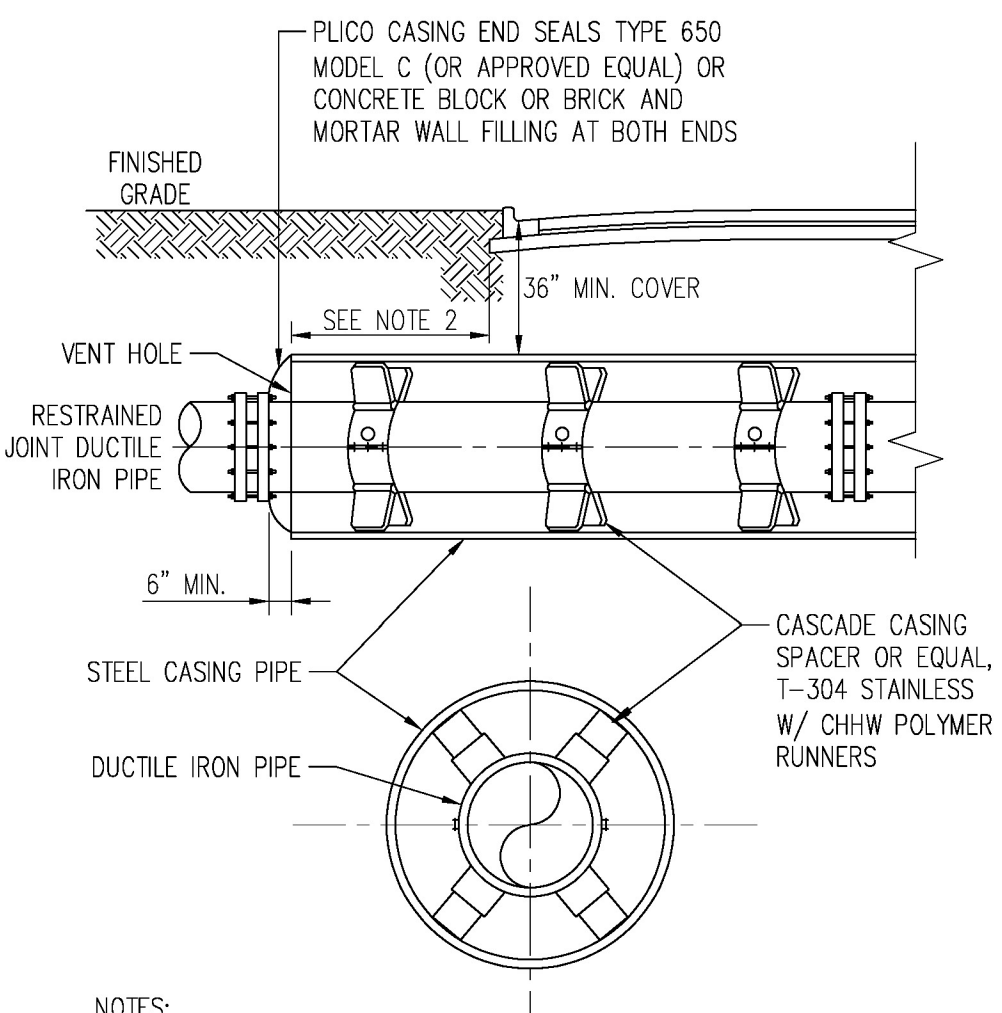
6 SANITARY SEWER CLEAN OUT DETAIL
N.T.S.



NOTES:

1. CLEANOUT SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH STANDARD PLUMBING CODE.
2. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW SPRING LINE.
3. WYES AND 45° BENDS SHALL BE PVC (SDR 26).
4. LOCATE SINGLE LATERAL AS CLOSE TO LOT LINE AS POSSIBLE, 25' MAXIMUM.
5. 4' TYP TERMINAL DEPTH (3' MIN) REQUIRED FOR SERVICE AT RIGHT-OF-WAY.

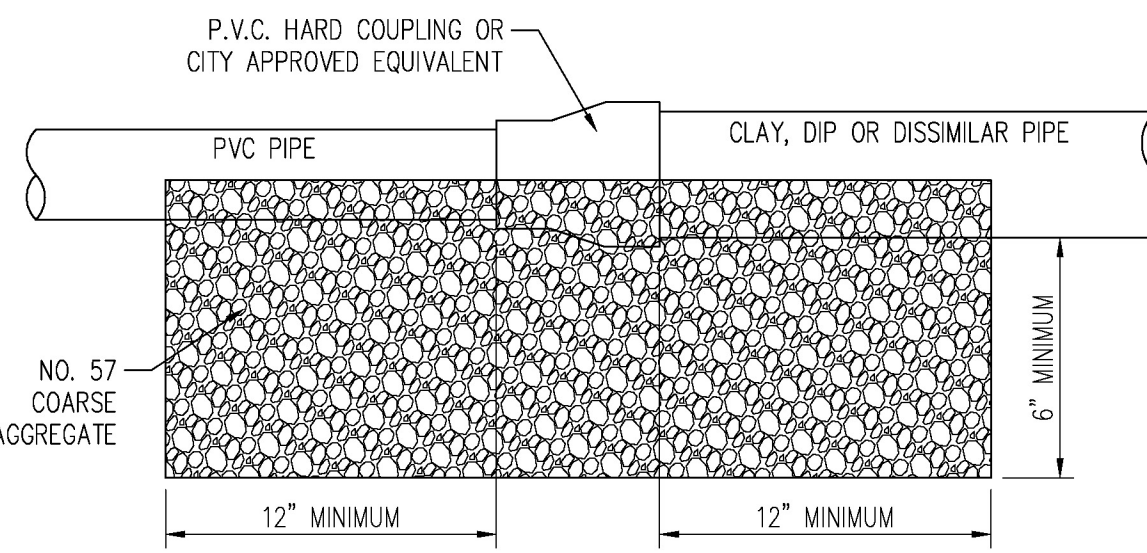
7 SANITARY SEWER SERVICE LATERAL DETAIL
N.T.S.



NOTES:

1. WHERE PRACTICAL, CASING SHALL EXTEND 8' BEYOND EDGE OF PAYMENT AND SHALL NOT BE LESS THAN 6' BEYOND EDGE OF PAYMENT IN ANY CASE.
2. CASING SPACERS AND END SEALS TO BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
3. DESIGN ENGINEER TO DETERMINE NEED FOR SACRIFICIAL ANODE (S) FOR CORROSION CONTROL.

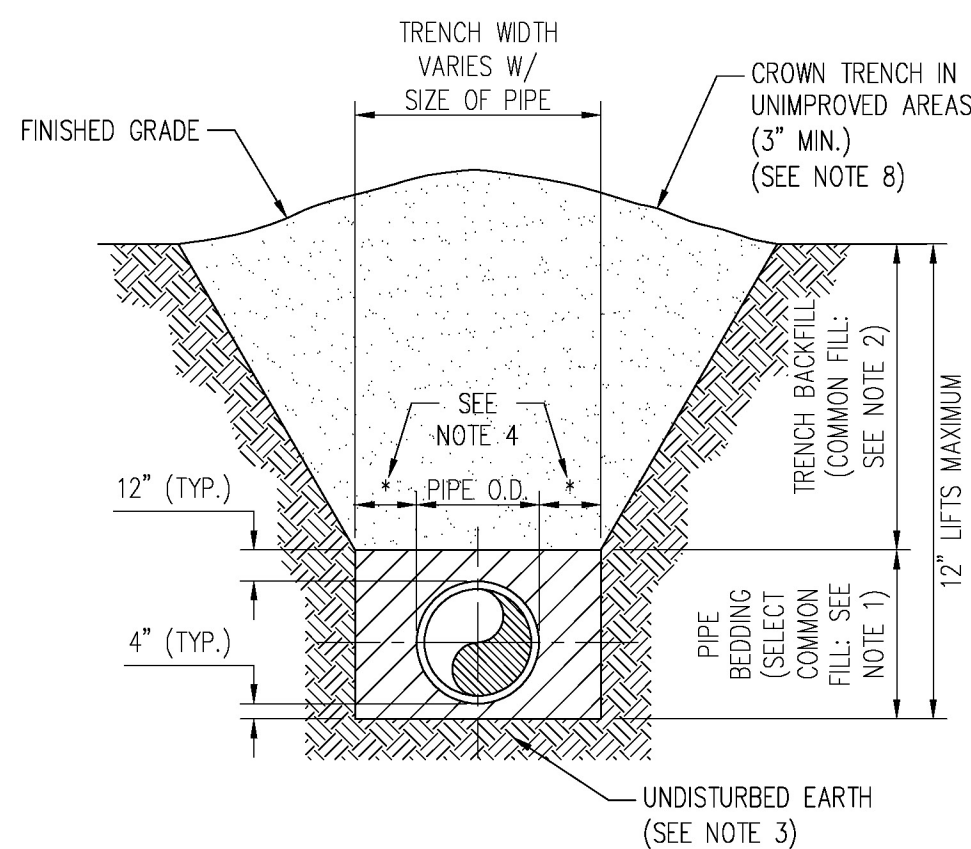
8 SEWER MAIN STEEL CASING DETAIL
N.T.S.



NOTE:

1. FIELD VERIFY MATERIALS OF EXISTING PIPES TO SELECT PROPER CONNECTOR.
2. HARBOR COUPLING OR APPROVED EQUIVALENT FOR ALL PIPE MATERIALS, UNLESS APPROVED IN WRITING BY THE CITY.

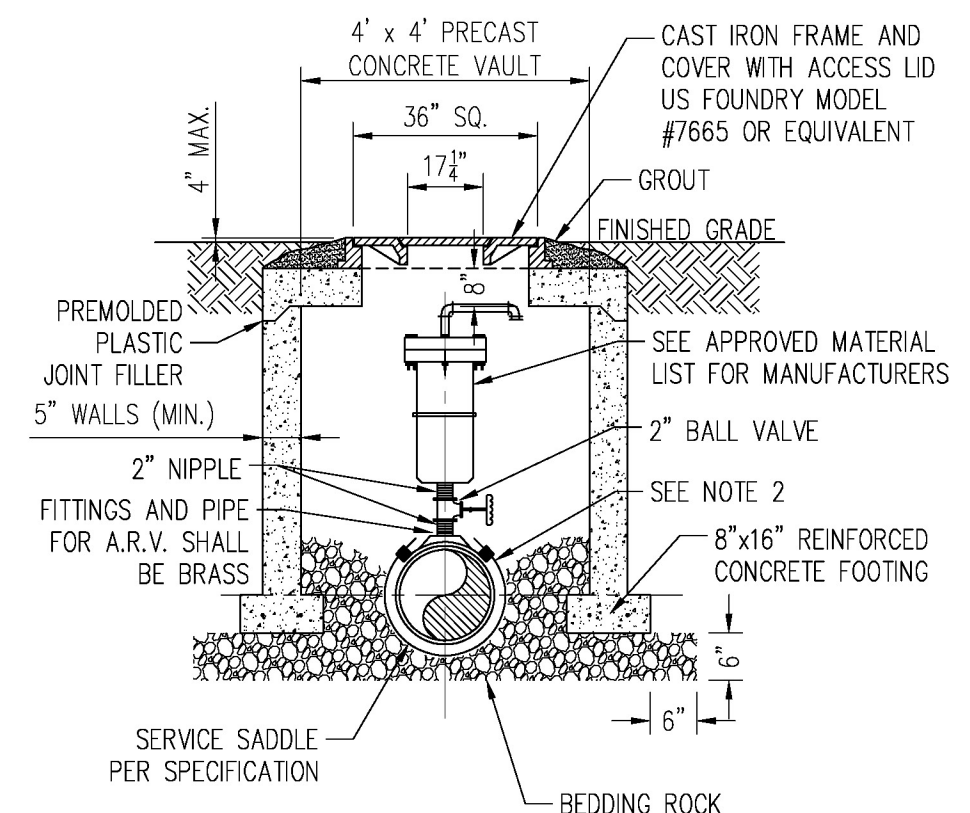
9 SEWER MAIN CONNECTION DETAIL
N.T.S.



NOTES:

1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER AASHTO T-180 AND CONTAINING NO MORE THAN 5% PASSING #200 SIEVE.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 98% OF THE MAXIMUM DENSITY AS PER AASHTO T-180 AND CONTAINING NO MORE THAN 5% PASSING #200 SIEVE.
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING MAY BE REQUIRED AS DIRECTED BY THE CITY OF WINTER GARDEN.
4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. REFER TO SECTION 32.5 OF THE CITY OF WINTER GARDEN MANUAL OF STANDARDS AND SPECIFICATIONS FOR WASTEWATER AND WATER MAIN CONSTRUCTION FOR SHEETING AND BRACING IN EXCAVATIONS.
8. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES. SURFACE RESTORATION WITHIN CITY OF WINTER GARDEN RIGHT-OF-WAY SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS AND ROAD CONSTRUCTION SPECIFICATIONS.

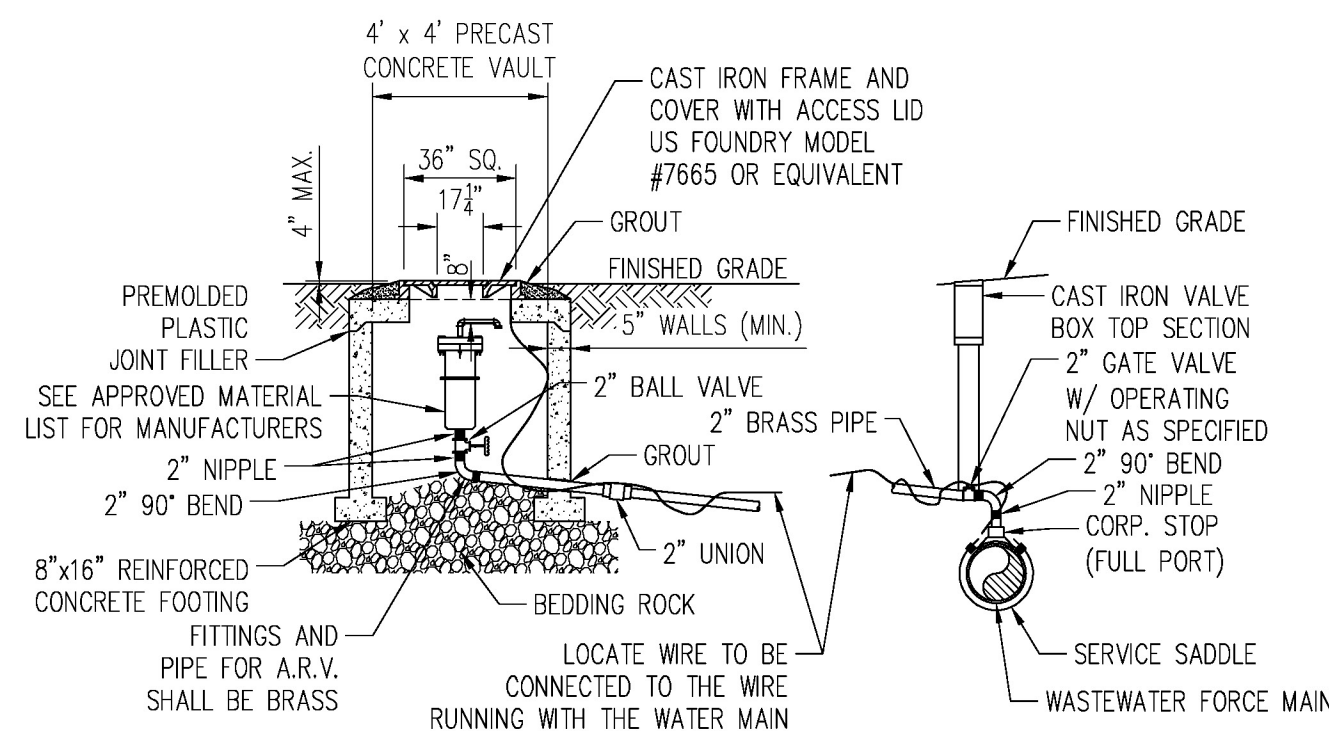
4 STANDARD BEDDING DETAIL
N.T.S.



NOTES:

1. THE MINIMUM DIMENSION FROM TOP OF PIPE TO FINISHED GRADE SHALL BE 3.0 FEET.
2. DOUBLE STRAP SADDLE AND WRAP WITH TWO LAYERS OF WIDE PLASTIC OR POLY TAPE WITH STAINLESS STEEL STRAP.
3. PIPE INSTALLATION SHALL BE SUCH THAT THE A.R.V. IS LOCATED AT THE HIGHEST POINT IN THE RESPECTIVE SEGMENT.
4. INTERIOR AND EXTERIOR CONCRETE SURFACES SHALL RECEIVE PROTECTIVE COATING AS SPECIFIED FOR VALVE VAULTS.
5. CAST IRON FRAME, COVER AND ACCESS LID SHALL BE INSTALLED FLUSH WITH FINISHED GRADE.
6. COVER SHALL READ "WINTER GARDEN UTILITIES DIVISION AND "WASTEWATER".
7. NO GALVANIZED PIPE/VALVES.

5 AIR RELEASE VALVE & VAULT
N.T.S.



NOTES:

1. THE MINIMUM DIMENSION FROM TOP OF PIPE TO FINISHED GRADE SHALL BE 4.0 FEET.
2. DOUBLE STRAP SADDLE AND WRAP WITH TWO LAYERS OF WIDE PLASTIC OR POLY TAPE WITH STAINLESS STEEL STRAP.
3. PIPE INSTALLATION SHALL BE SUCH THAT THE A.R.V. IS LOCATED AT THE HIGHEST POINT IN THE RESPECTIVE SEGMENT.
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5. CAST IRON FRAME, COVER AND ACCESS LID SHALL BE INSTALLED FLUSH WITH FINISHED GRADE.
6. COVER SHALL READ "WINTER GARDEN UTILITIES DIVISION, "SEWER" "RECLAIMED WATER OR POTABLE WATER".
7. NO GALVANIZED PIPE/VALVES.
8. LOCATE WIRE IN THE ARV VAULT SHALL BE SPLICED TO THE WIRE RUNNING WITH THE MAIN AND EXCESS WIRE TO BE PLACED IN ARV VAULT. THE POINT OF CONNECTION AT THE MAIN SHALL HAVE A WATER PROOF CONNECTOR.

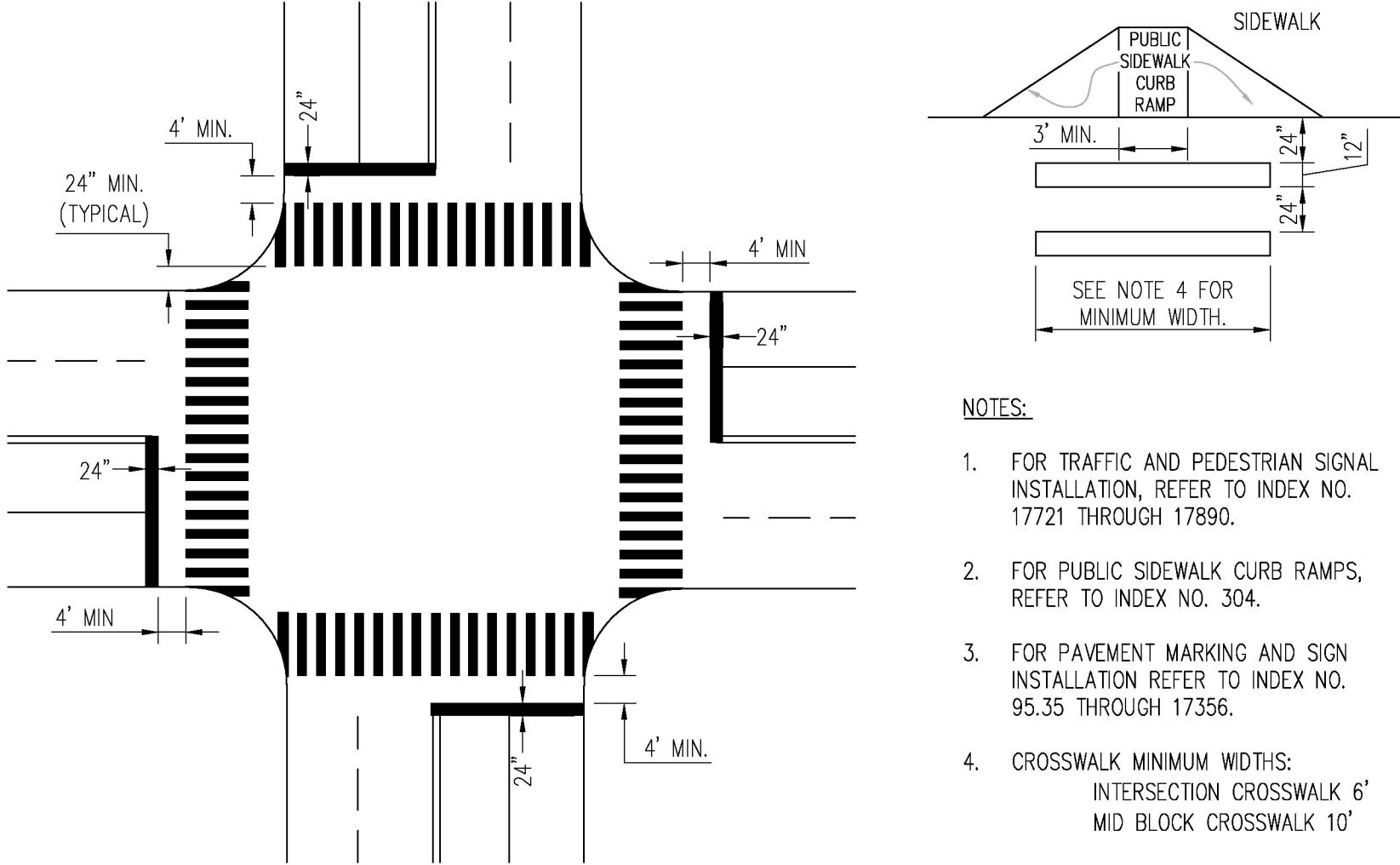
10 OFFSET AIR RELEASE VALVE ASSEMBLY
N.T.S.

WINTER GARDEN STANDARDS INCORPORATED WITH DESIGN ENGINEERS DOCUMENTS:

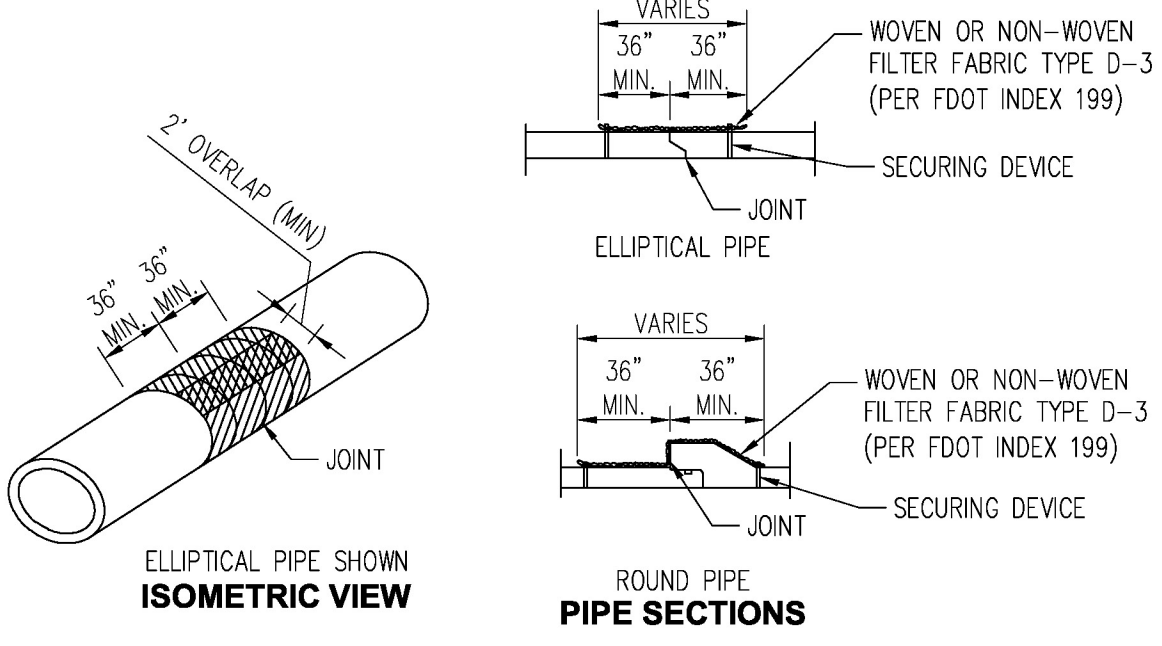
THE DETAILS, NOTES AND SPECIFICATIONS SHOWN ON THIS SHEET REPRESENT THE NOTED STANDARDS OF THE CITY OF WINTER GARDEN FOR CONSTRUCTION OF PUBLIC WORKS AND UTILITY INFRASTRUCTURE. BY INCLUDING THE STANDARDS, THE DESIGN ENGINEER HAS ACKNOWLEDGED THAT THEY ARE EFFECTIVE TO THE PROJECT AND THAT DETAILS, NOTES, OR SPECIFICATIONS ARE AS PROVIDED BY THE CITY AND HAVE NOT BEEN REVISED OR MODIFIED WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER OR UTILITY DIRECTOR.

GENERAL NOTES:

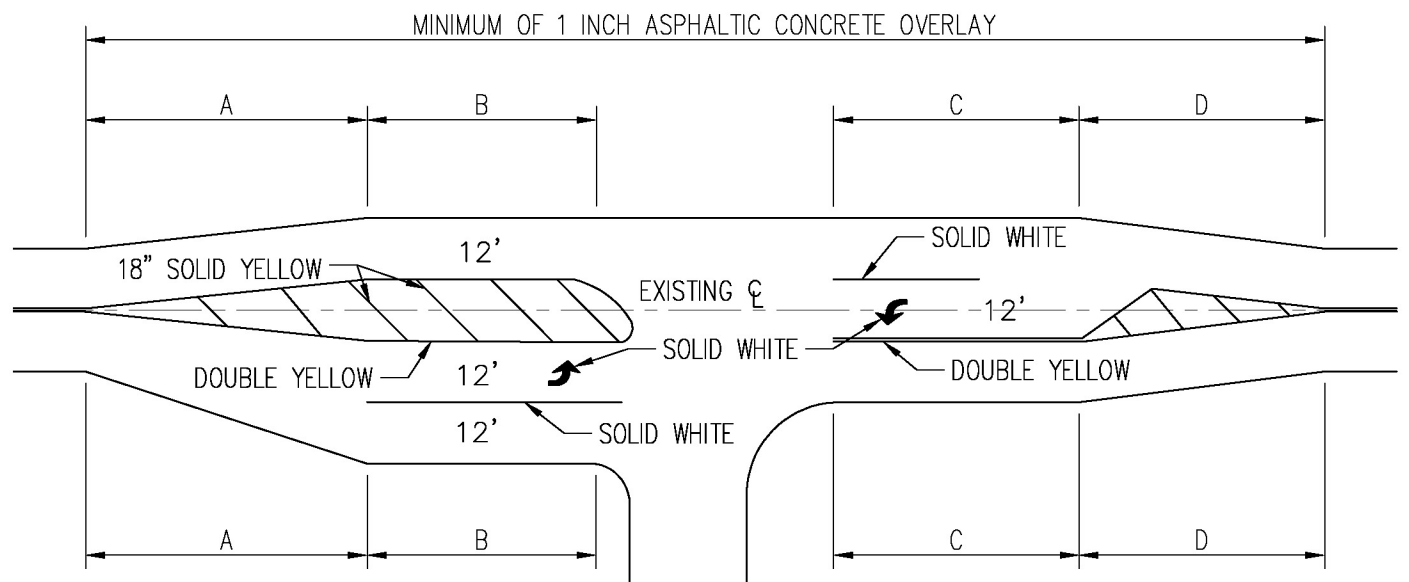
- ALL NEW STORM AND SANITARY SEWER LINES IN THE CITY OF WINTER GARDEN SHALL BE SUBJECTED TO CLOSED CIRCUIT TV INSPECTION PRIOR TO BEING ACCEPTED BY THE CITY, WHETHER PRIVATE OR CITY MAINTAINED. ALL STORM SEWER PIPE SHALL BE REINSPECTED AT THE YEAR END, COST TO BE PAID BY THE OWNER.
- PIPE MATERIAL SHALL BE AS SHOWN ON THE CONSTRUCTION PLANS UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- CONTRACTOR AND OWNER ARE RESPONSIBLE FOR ENSURING THAT ALL CITY, COUNTY, STATE (FDEP, FDOT, SJRWMD, ETC.), AND FEDERAL PERMITS HAVE BEEN ISSUED FOR THE PROJECT.
- ALL STORM SYSTEM MUST BE WATER-TIGHT WITH ALL JOINTS WRAPPED.
- STORM SYSTEM WILL BE CLEANED PRIOR TO BEING TV'D.
- THE OWNER SHALL KEEP A COPY OF THE WATER MANAGEMENT DISTRICT PERMIT, NPDES, NOI AND SWPP PLAN IN A CONSPICUOUS LOCATION ON THE JOB SITE AT ALL TIMES.
- ALL STORM SEWER MANHOLES FRAME & COVER SHALL BE ASTM 225.
- CLEAN SAND SHALL CONSIST OF MATERIAL HAVING LESS THAN 5% PASSING THE #200 SIEVE.
- ONLY CONCRETE RISER RINGS WILL BE ALLOWED TO BE PLACED FOR STORM MANHOLES. ALL RISER RINGS SHALL BE SEALED TO THE STRUCTURE USING WRAPID SEAL. NO MORE THAN 15" WILL BE ALLOWED.
- STORM SEWER PIPES SHALL MEET ASTM C76 & ASTM C507.
- ALL STORM SEWER STRUCTURE SECTIONS SHALL BE SEALED WITH WRAPID SEAL.



1 TYPICAL CROSSWALK
N.T.S.



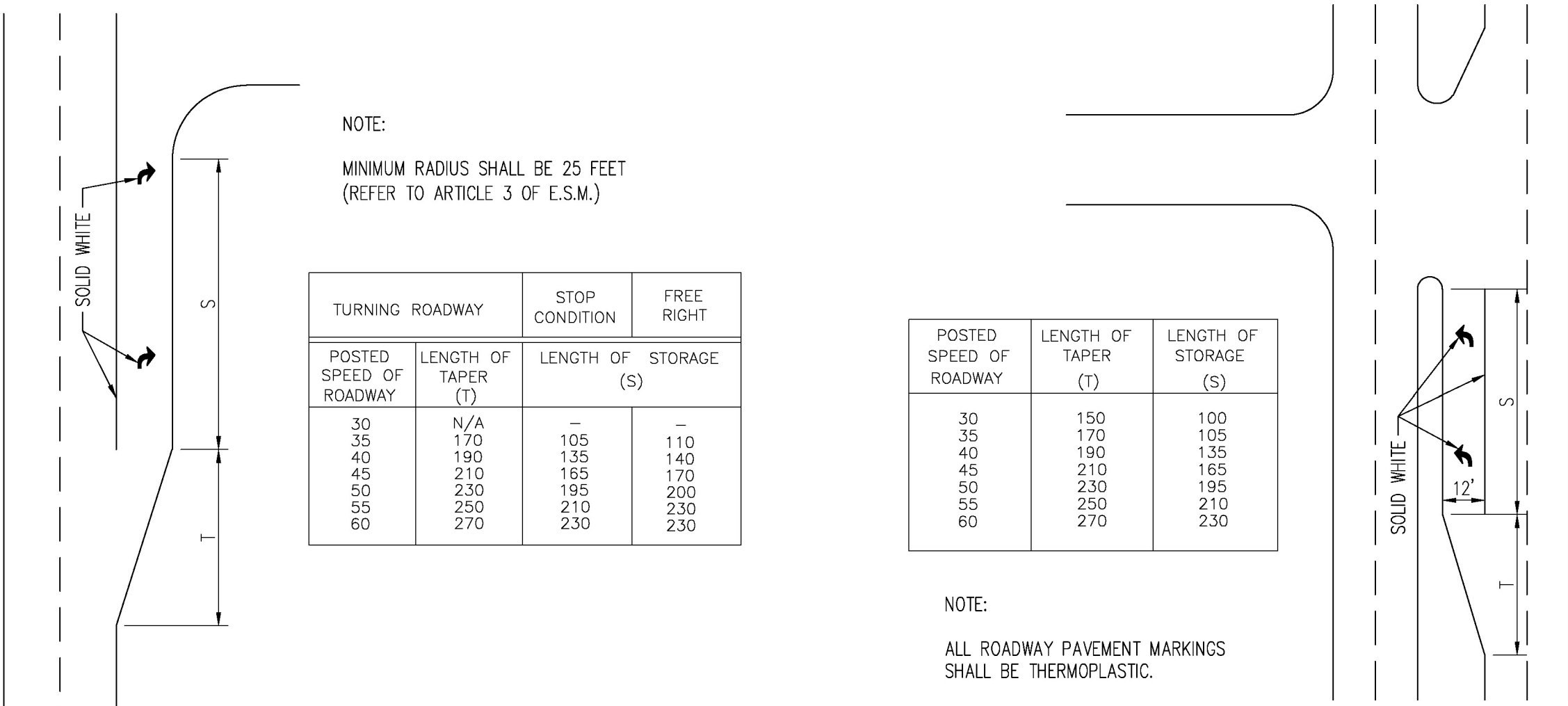
2 FILTER FABRIC JACKET
N.T.S.



- NOTES:
- STRIPING ACCORDING TO F.D.O.T. STANDARD INDEX #17346B.
 - LANE WIDTHS TO MATCH EXISTING LANE WIDTHS.
 - MINIMUM RADIUS SHALL BE 25 FEET (REFER TO ARTICLE 3 OF E.S.M.)
 - ALL ROADWAY PAVEMENT MARKING SHALL BE THERMOPLASTIC.

SPEED	PAVEMENT MARKING LENGTHS			
	A	B	C	D
40 MPH	190'	110'	135'	190'
45 MPH	210'	140'	165'	210'
50 MPH	230'	170'	195'	230'
55 MPH	250'	200'	210'	250'

3 TYPICAL INTERSECTION
N.T.S.



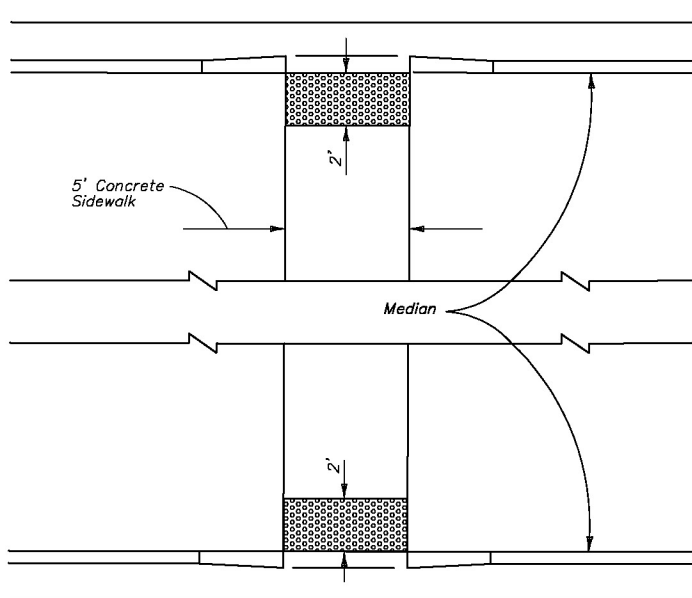
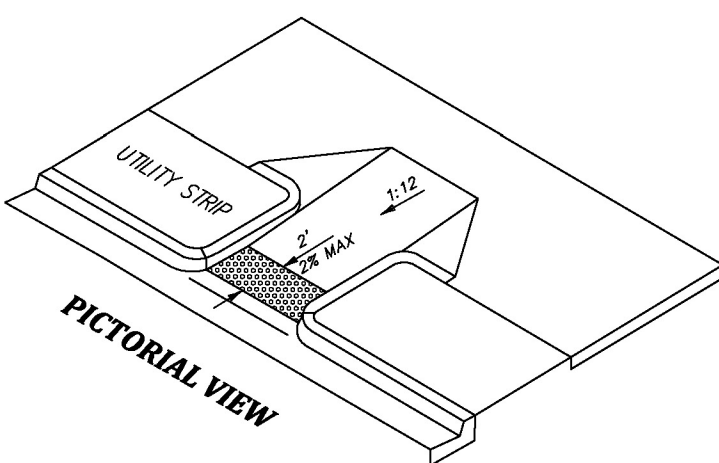
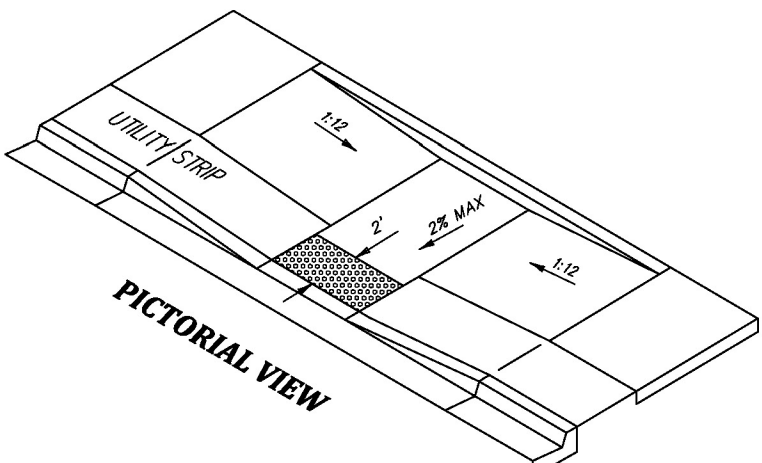
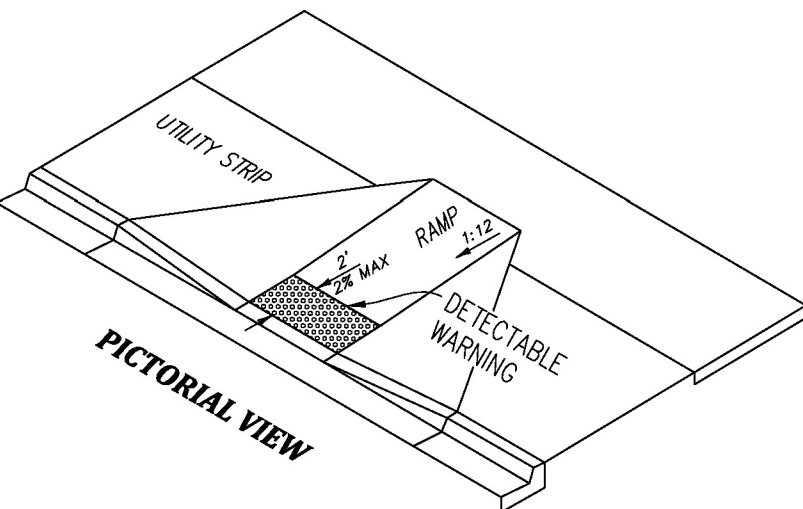
TURNING ROADWAY POSTED SPEED OF ROADWAY	LENGTH OF TAPER (T)	STOP CONDITION LENGTH OF (S)	FREE RIGHT
30	N/A	105	110
35	170	135	140
40	190	165	170
45	210	195	200
50	230	210	230
55	250	230	230
60	270	230	230

POSTED SPEED OF ROADWAY	LENGTH OF TAPER (T)	LENGTH OF STORAGE (S)
30	150	100
35	170	105
40	190	135
45	210	165
50	230	195
55	250	210
60	270	230

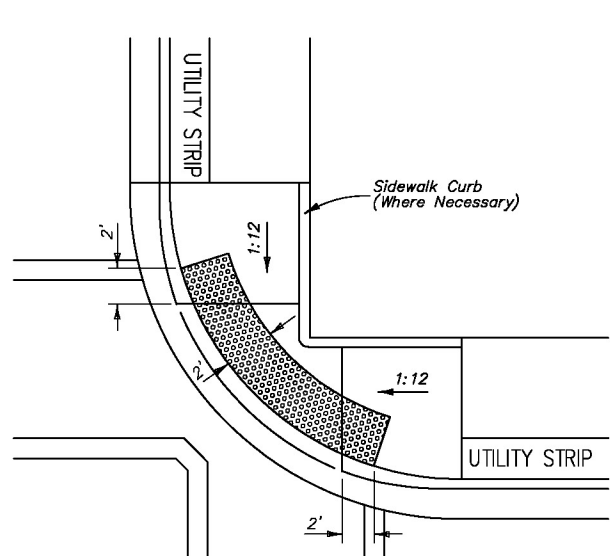
NOTE:
ALL ROADWAY PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.

4 RIGHT TURN DECELERATION LANE
N.T.S.

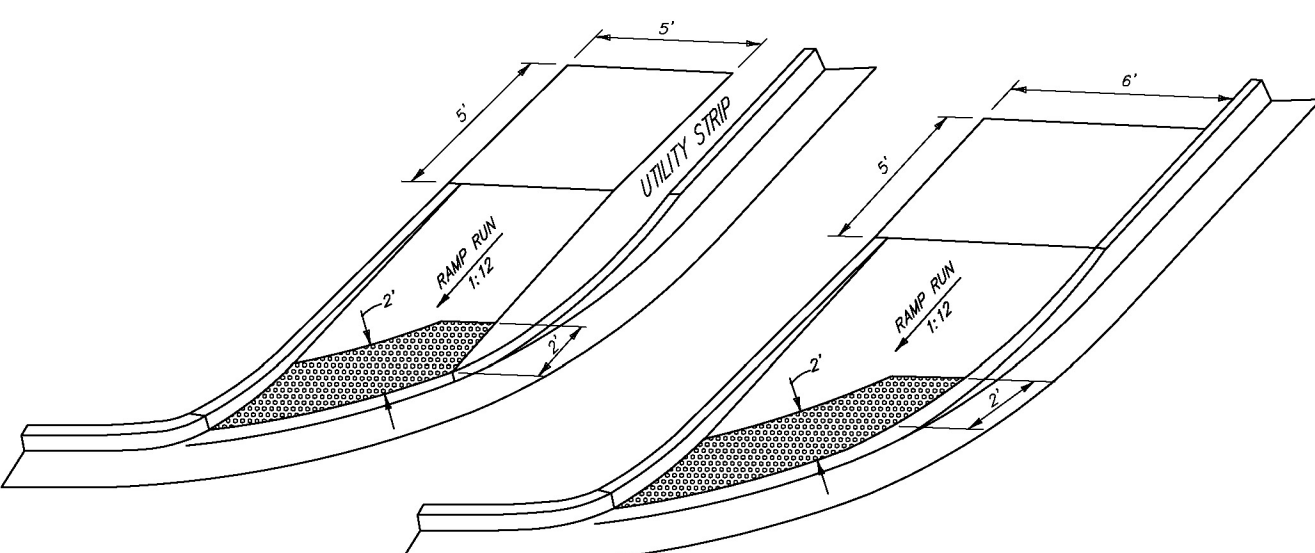
5 DIVIDED HIGHWAY LEFT TURN STORAGE LANE
N.T.S.



PLAN

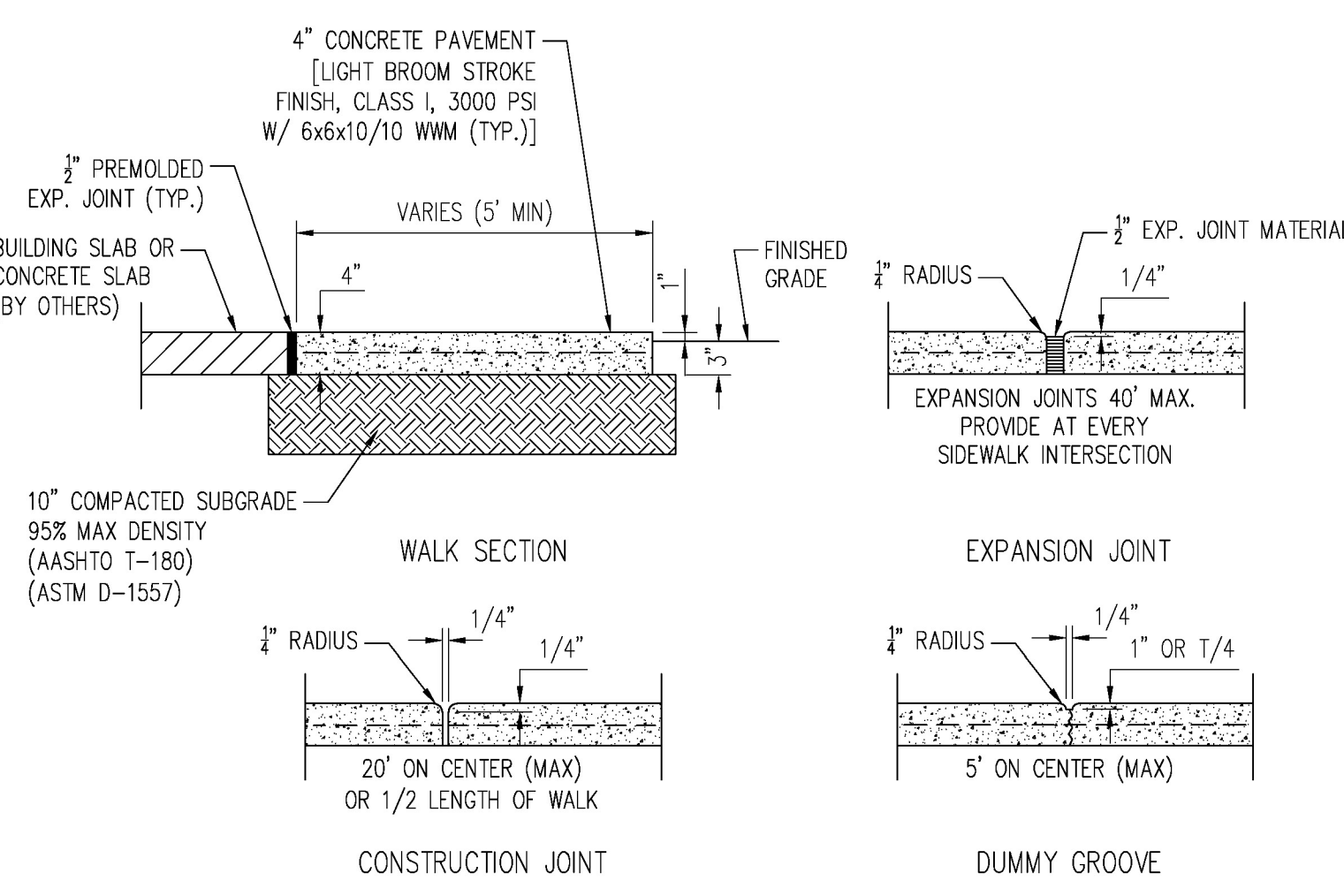


PLAN

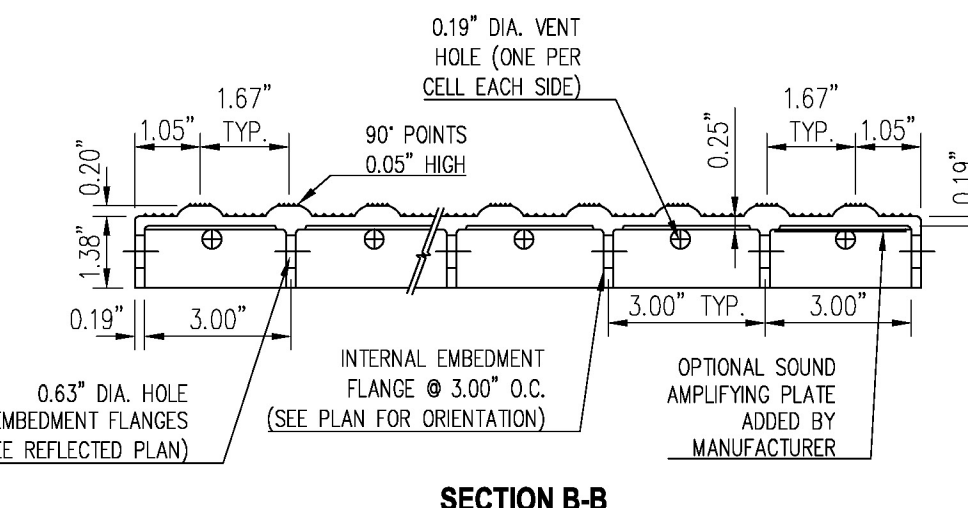
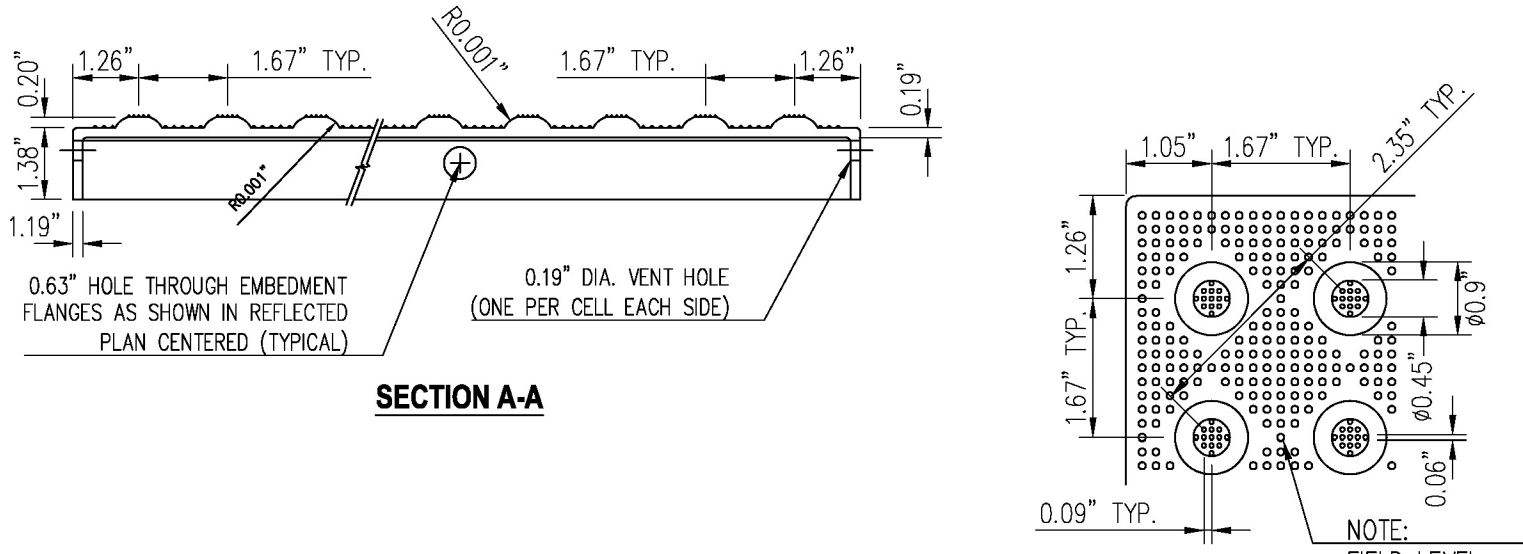
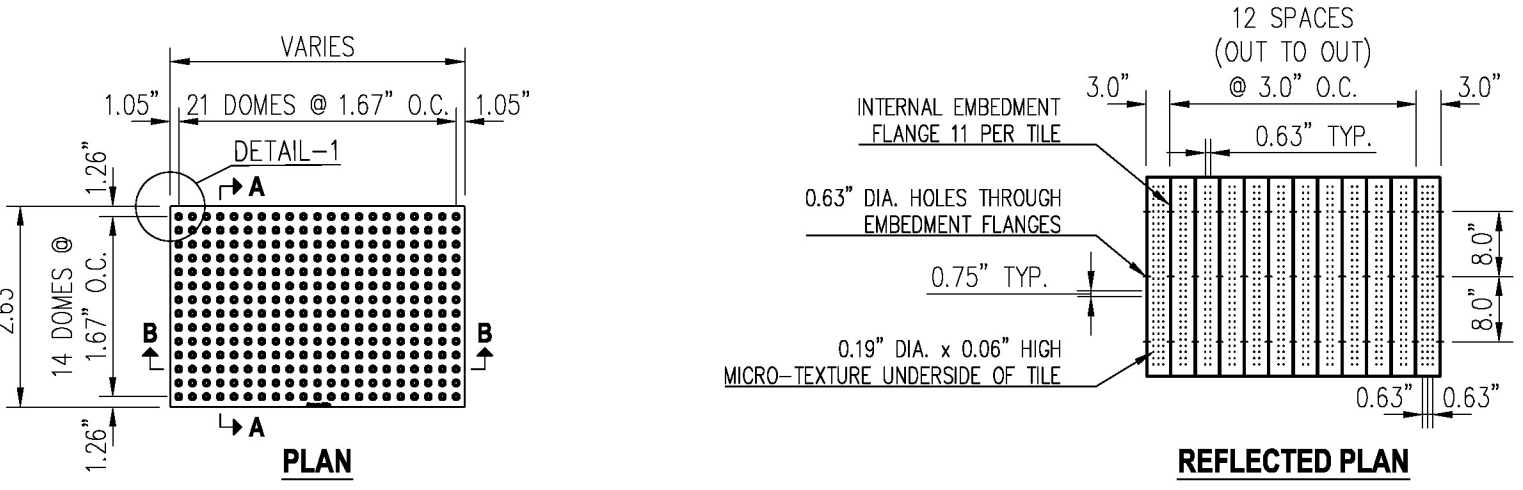


PICTORIAL VIEWS

6 CURB RAMPS & DETECTABLE WARNING PLACEMENT
N.T.S.



7 SIDEWALK DETAILS
N.T.S.



- NOTE:
- CURB RAMP DETECTABLE WARNING TILE SHALL BE ARMOR TILE OR EQUAL.
 - ALL SIDEWALK CURB RAMPS SHALL HAVE DETECTABLE WARNING SURFACES THAT EXTEND THE FULL WIDTH OF THE RAMP AND IN THE DIRECTION OF TRAVEL 24 INCHES (610 MM) FROM THE BACK OF CURB.

8 DETECTABLE WARNING DETAIL
N.T.S.

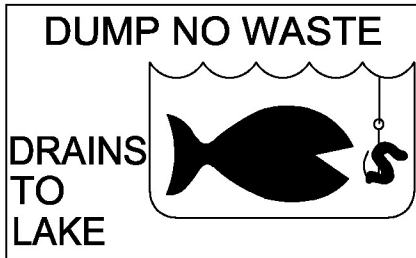
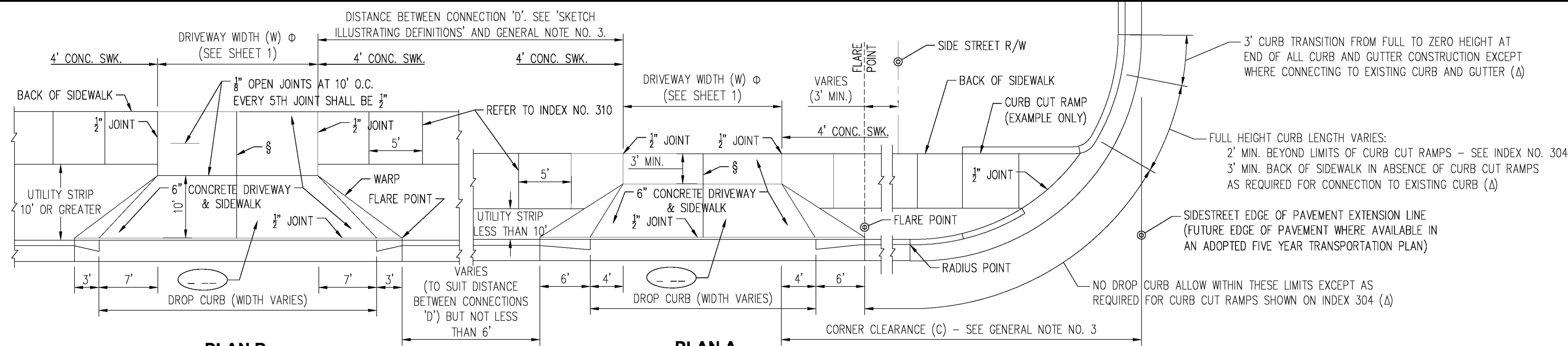


PLATE SHALL BE ADDED TO STORMWATER INLETS AS REQUIRED BY THE CITY.

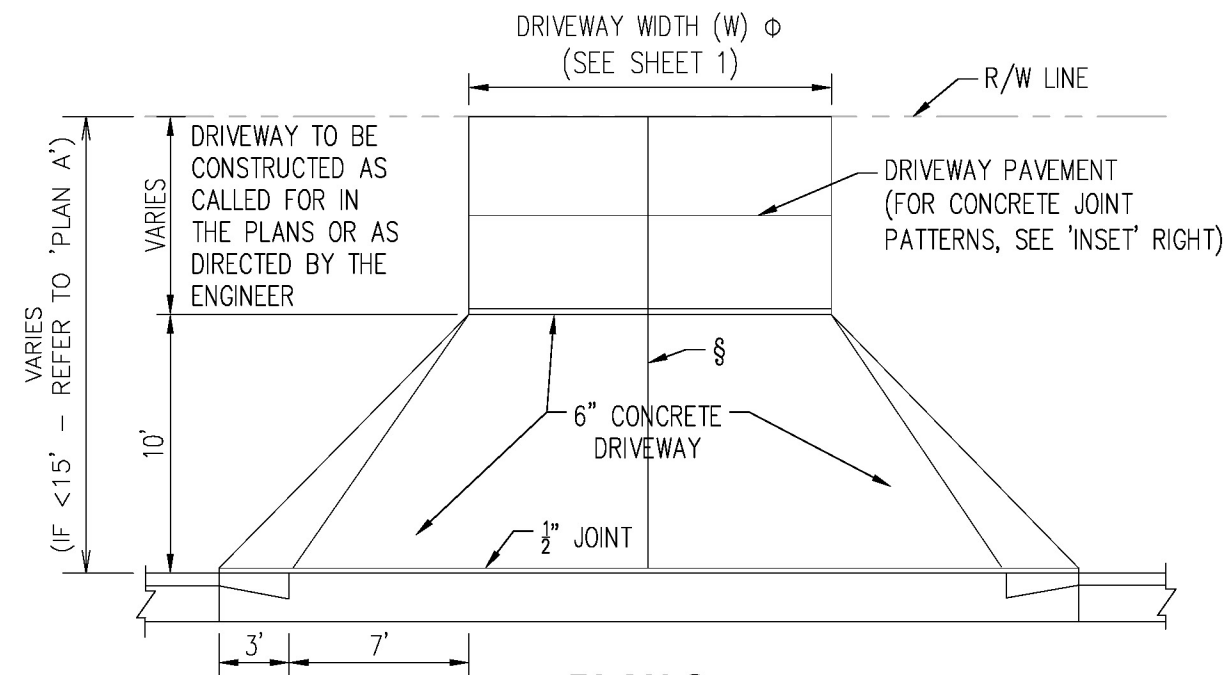
WINTER GARDEN STANDARDS INCORPORATED WITH DESIGN ENGINEERS DOCUMENTS:

THE DETAILS, NOTES AND SPECIFICATIONS SHOWN ON THIS SHEET REPRESENT THE NOTED STANDARDS OF THE CITY OF WINTER GARDEN FOR CONSTRUCTION OF PUBLIC WORKS AND UTILITY INFRASTRUCTURE. BY INCLUDING THE STANDARDS, THE DESIGN ENGINEER HAS ACKNOWLEDGED THAT THEY ARE EFFECTIVE TO THE PROJECT AND THAT DETAILS, NOTES, OR SPECIFICATIONS ARE AS PROVIDED BY THE CITY AND HAVE NOT BEEN REVISED OR MODIFIED WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER OR UTILITY DIRECTOR.

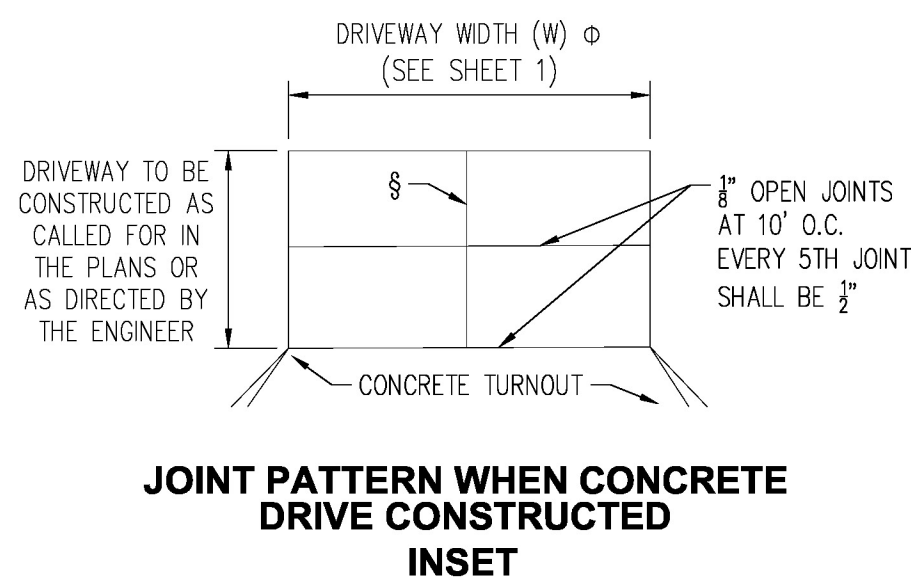


PLAN B
TURNOUT WITH SIDEWALK AND UTILITY STRIP (10' OR GREATER)

PLAN A
TURNOUT WITH SIDEWALK AND UTILITY STRIP (LESS THAN 10')



PLAN C
TURNOUT WITHOUT SIDEWALK



- FOOTNOTES:**
- ALL $\frac{1}{2}$ " JOINTS SHALL BE CONSTRUCTED WITH PREFORMED JOINT FILLER.
 - OPEN JOINTS PLACED AT EQUAL (20' MAX.) INTERVALS FOR DRIVEWAYS OVER 20' WIDE. JOINTS IN CURB AND GUTTER TO MATCH JOINTS IN DRIVEWAYS.
 - WHEN CONNECTING TO SIDESTREET CURB AND GUTTER SECTIONS, THE NO DROP CURB LIMITS SHOULD EXTEND BACK TO THE SIDESTREET RADIUS POINT. WITH OR WITHOUT CURB AND GUTTER, NO DRIVEWAY SHOULD ENCRATCH ON THE CORNER RADIUS.
 - DRIVEWAYS (6" CONCRETE) SHALL BE OF A UNIFORM WIDTH (W) TO THE RIGHT OF WAY LINE.
 - ALPHA-NUMERIC IDENTIFICATION OF A FLARED DRIVEWAY TYPE SPECIFICALLY CALLED FOR IN THE PLANS, SEE SHEETS 3 AND 4.

DESIGN NOTES FOR URBAN FLARED TURNOUTS

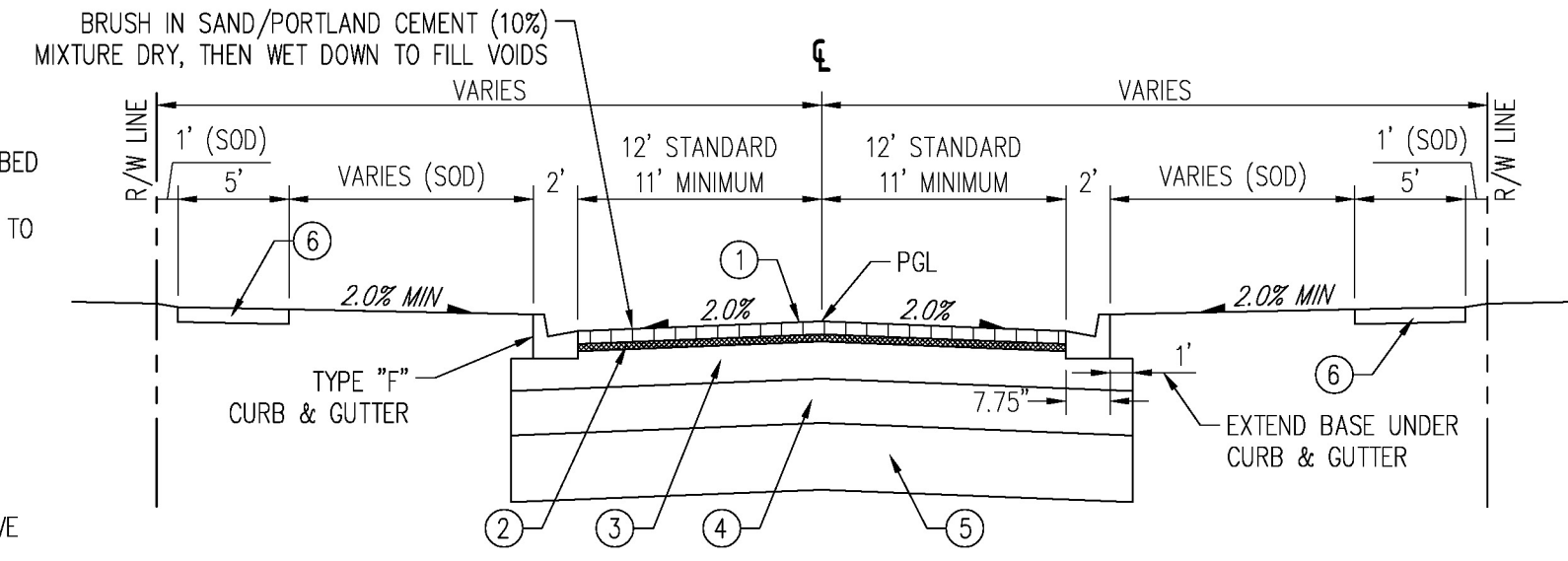
- DRIVEWAY 6" CONCRETE PAVEMENT AND DROP CURB SHALL MEET THE MATERIAL AND CONSTRUCTION REQUIREMENTS OF SECTIONS 522 AND 520 RESPECTIVELY OF THE FDOT STANDARD SPECIFICATIONS. THE DRIVEWAY FOUNDATION SHALL MEET THE REQUIREMENT OF SUBARTICLE 522-4.
- FOR DETAILS OF DROP CURB AND CURB CUT RAMPS REFER TO INDEXES NOS. 300 AND 304 RESPECTIVELY.
- WHERE TURNOUTS ARE CONSTRUCTED WITHIN EXISTING CURB AND GUTTER, THE EXISTING CURB AND GUTTER SHALL BE REMOVED EITHER TO THE NEAREST JOINT BEYOND THE FLARE POINT OR TO THE EXTENT THAT NO REMAINING SECTION IS LESS THAN 5 FEET LONG; AND, DROP CURB CONSTRUCTED IN ACCORDANCE WITH NOTES NOS. 1 AND 2.
- COST FOR PREFORMED JOINT FILLER SHALL BE INCLUDED IN THE COST FOR THE CONCRETE PAVEMENT (CONCRETE SIDEWALK, 6" THICK).
- FOR TURNOUTS WITH RADIAL RETURNS SEE THE REQUIREMENTS UNDER THE "SUMMARY OF GEOMETRIC REQUIREMENTS FOR TURNOUTS", THE "GENERAL NOTES", THE DETAILS OF "RURAL TURNOUT CONSTRUCTION" AND THE DETAIL OF "LIMITS OF CLEARING & GRUBBING, STABILIZATION AND BASE AT INTERSECTIONS".
- DEPARTMENT MAINTENANCE OF PAVEMENT SHALL EXTEND OUT TO THE RIGHT OF WAY OR 2 FEET BACK OF SIDEWALK, WHICHEVER DISTANCE IS LESS.
- THE MAINTENANCE AND OPERATION OF HIGHWAY LIGHTING, TRAFFIC SIGNALS, ASSOCIATED EQUIPMENT, AND OTHER NECESSARY DEVICES SHALL BE THE RESPONSIBILITY OF A PUBLIC AGENCY.
- ALL PAVEMENT MARKINGS ON THE STATE HIGHWAYS, INCLUDING ACCELERATION AND DECELERATION LANE MARKINGS, AND SIGNING INSTALLED FOR THE OPERATION OF THE STATE HIGHWAY SHALL BE MAINTAINED BY THE DEPARTMENT.
- ALL SIGNING AND MARKING INSTALLED FOR THE OPERATION OF THE CONNECTION (SUCH AS STOP BARS AND STOP SIGNS FOR THE CONNECTION) SHALL BE THE RESPONSIBILITY OF THE PERMITTEE.
- TURNOUTS WILL BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR SIDEWALK CONCRETE (6" THICK), SY.

- DRIVEWAYS INDICATED AS 'ADVERSE APPLICATIONS' ARE THOSE WITH SLOPES THAT CAN CAUSE OVERHANG DRAG FOR REPRESENTATIVE STANDARD PASSENGER VEHICLES UNDER FULLY LOADED CONDITIONS; OR, THOSE WITH SLOPES THAT CAN CAUSE DRIVERS WHO ARE LEAVING THE ROADWAY TO SLOW OR PAUSE TO THE EXTENT THAT TRAFFIC DEMAND VOLUMES WILL BE IMPEDED.
 - THE STANDARD FLARED DRIVEWAYS ON THIS INDEX MAY NOT ACCOMMODATE VEHICLES WITH LOW BEDS, LOW UNDERCARRIAGE OR LOW APPENDAGE FEATURES. WHERE SUCH VEHICLES ARE DESIGN VEHICLES DRIVEWAYS ARE TO HAVE SITE SPECIFIC FLARE DESIGNS OR CATEGORY ~~~~ DESIGNS.
 - WHEN SPECIFIC FLARE TYPE DRIVEWAYS ARE TO BE CONSTRUCTED, THE TYPE SHALL BE DESIGNATED IN THE PLANS USING THE ASSIGNED ALPHA-NUMERIC DESIGNATION.
- DRIVEWAYS INDICATED AS 'MARGINAL APPLICATIONS' ARE THOSE WITH SLOPES THAT CAN CAUSE OVERHANG DRAG FOR REPRESENTATIVE STANDARD PASSENGER VEHICLES UNDER FULLY LOADED CONDITIONS WHEN THE DRIVEWAY IS LOCATED ON THE LOW SIDE OF FULLY SUPERELEVATED ROADWAYS.
- DRIVEWAYS INDICATED AS 'GENERAL APPLICATIONS' ARE THOSE WITH SLOPES THAT CAN READILY ACCOMMODATE REPRESENTATIVE STANDARD PASSENGER VEHICLES AND THOSE THAT CAN ACCOMMODATE REPRESENTATIVE STANDARD TRUCKS, VANS, BUSES AND RECREATIONAL VEHICLES OPERATING UNDER NORMAL CROWN AND SUPERELEVATION CONDITIONS.

Note: See sheet 1 for 'GENERAL NOTES'

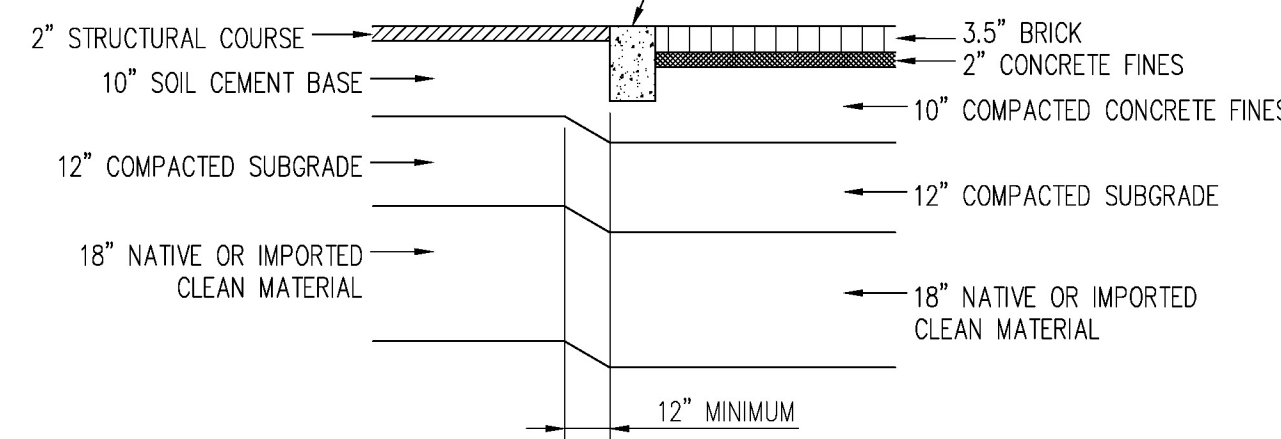
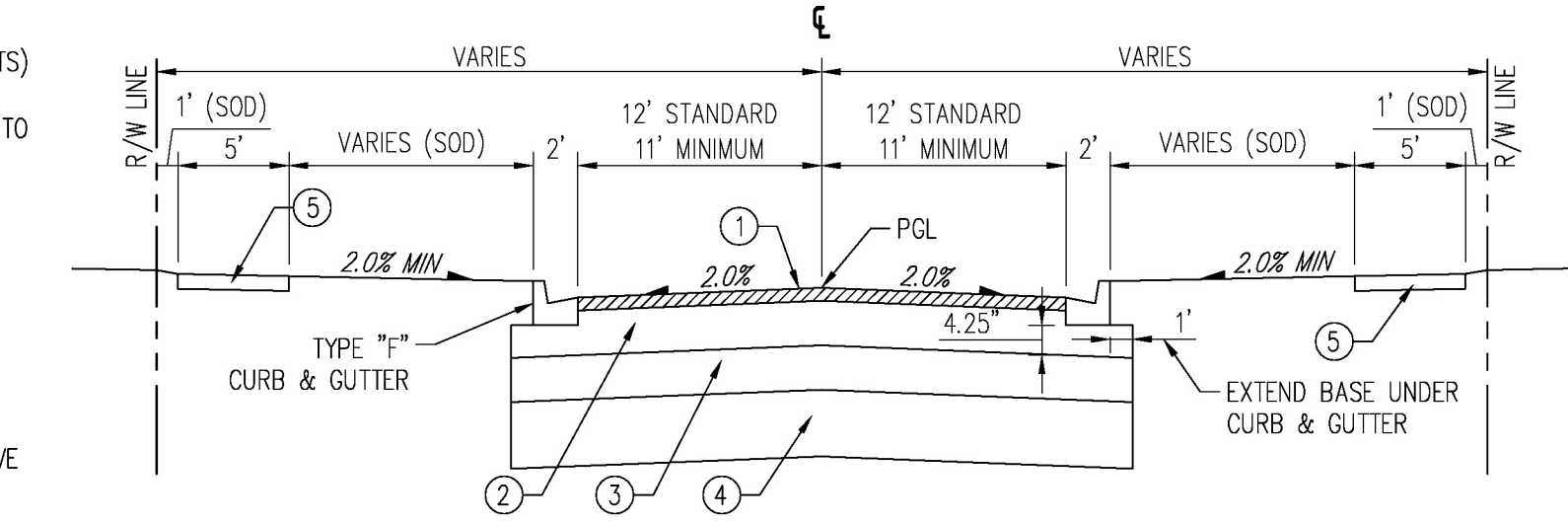
PAVEMENT DESIGN

- 3.5" BRICKS
- 1" - 2" LOOSE CONCRETE FINES LEVELING BED
- 10" BASE - COMPACTED CONCRETE FINES TO 98% MAX. DENSITY (AASHTO T-134). ASPHALTIC PRIME COAT APPLIED AT 0.15 GAL./SF
- 12" COMPACTED SUBGRADE (98% DENSITY) AASHTO T-180 AND LBR 40
- 18" OF NATIVE OR IMPORTED MATERIAL HAVING LESS THAN 5% PASSING #200 SIEVE COMPACTED TO 98% PER AASHTO T-180
- 4" THICK CONCRETE SIDEWALK

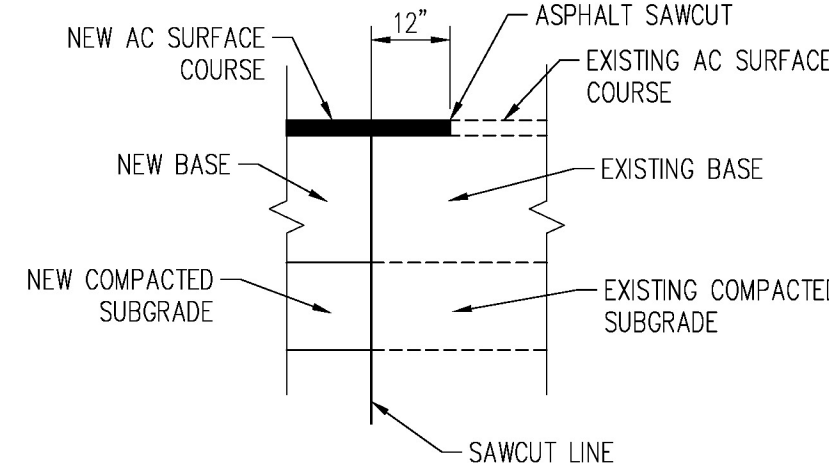


PAVEMENT DESIGN

- 2" TYPE S-1 STRUCTURAL COURSE (2 LIFTS)
- 10" BASE TYPE SOIL CEMENT COMPACTED TO 98% MAX. DENSITY (AASHTO T-134). ASPHALTIC PRIME COAT APPLIED AT 0.15 GAL./SF 300 PSI 7-DAY COMPRESSIVE STRENGTH
- 12" COMPACTED SUBGRADE (98% DENSITY) AASHTO T-180 AND LBR 40
- 18" OF NATIVE OR IMPORTED MATERIAL HAVING LESS THAN 5% PASSING #200 SIEVE COMPACTED TO 98% PER AASHTO T-180
- 4" THICK CONCRETE SIDEWALK

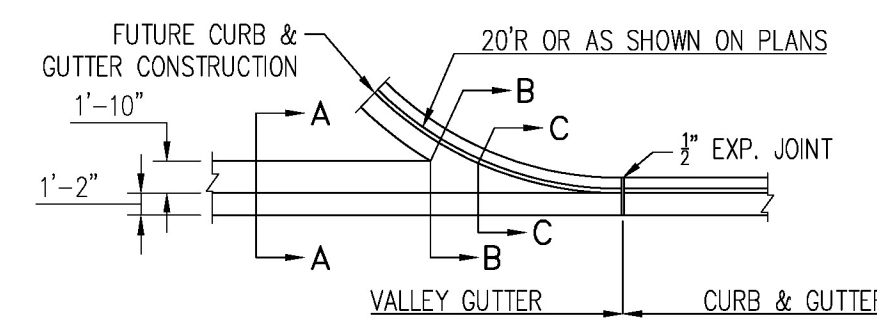


1 RIBBON CURB WITH BRICK PAVERS
N.T.S.

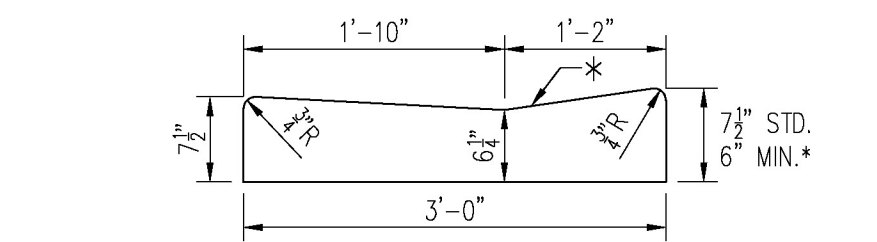


1 SAWCUT TYPICAL DETAIL
N.T.S.

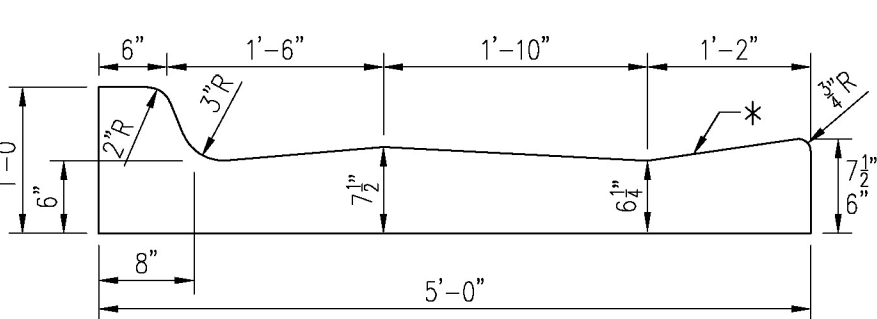
NOTE: CONTRACTOR SHALL APPLY A BITUMINOUS TACK COAT WHERE NEW ASPHALTIC CONCRETE PAVEMENT ABUTS EXISTING PORTLAND CEMENT CONCRETE PAVEMENT.



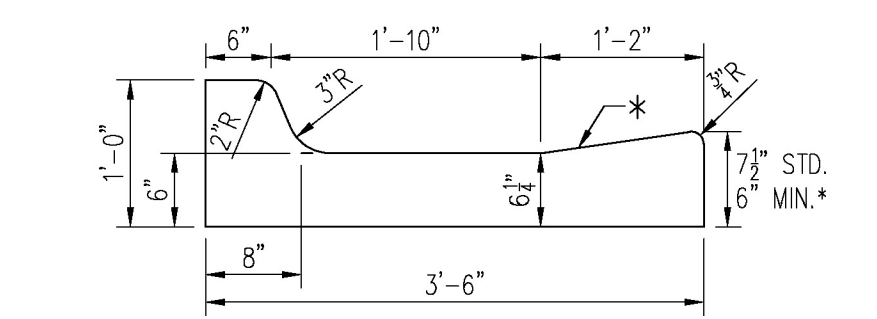
PLAN



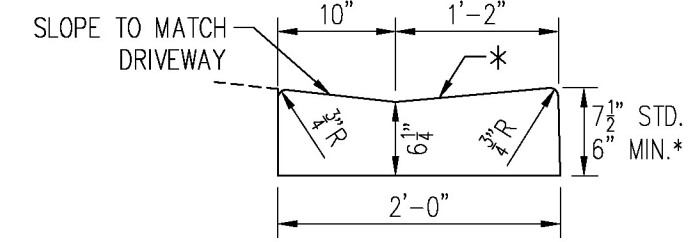
SECTION AA



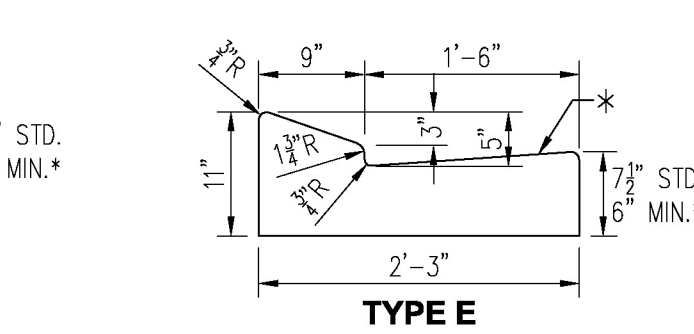
SECTION BB



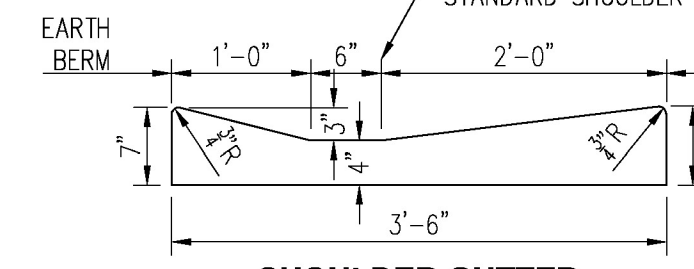
SECTION CC



DROP CURB
NOTE: TO BE PAID FOR AS PARENT CURB.



TYPE E

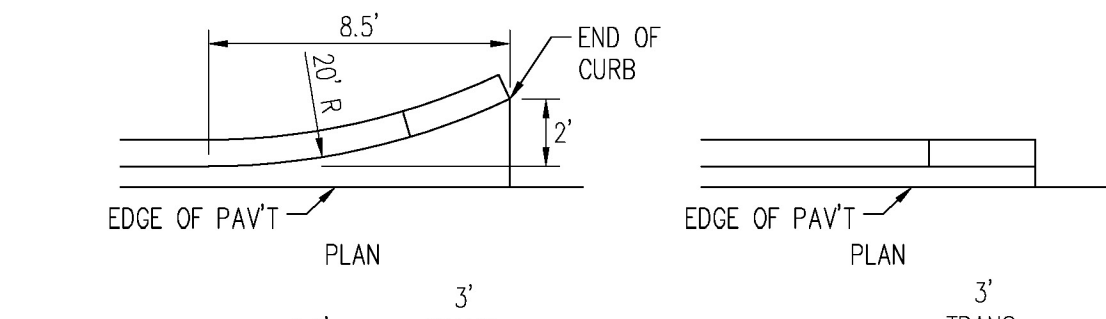


SHOULDER GUTTER

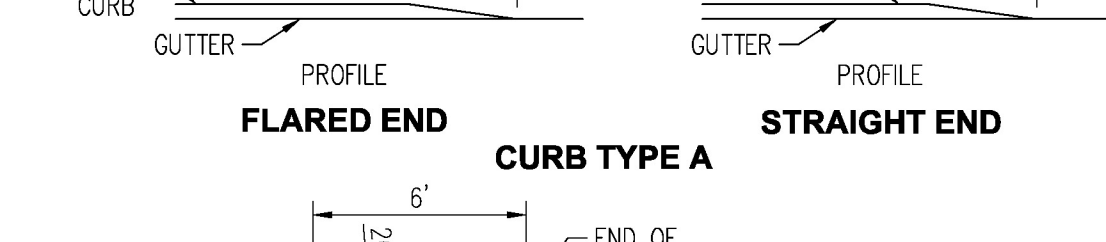
* WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT. THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN ON PLANS.

CONCRETE CURB AND GUTTER

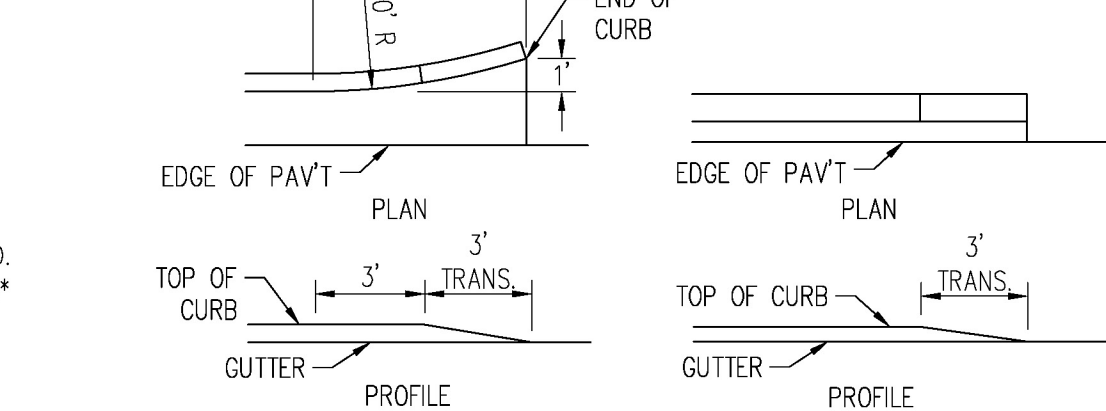
NOTE: FOR USE ADJACENT TO CONCRETE OR FLEXIBLE PAVEMENT, CONCRETE SHOWN. FOR DETAILS DEPICTING USAGE ADJACENT TO FLEXIBLE PAVEMENT, SEE DIAGRAM RIGHT. EXPANSION JOINT, PREFORMED JOINT FILLER AND JOINT SEAL ARE REQUIRED BETWEEN CURB & GUTTER AND CONCRETE PAVEMENT ONLY, SEE DIAGRAM RIGHT.



FLARED END

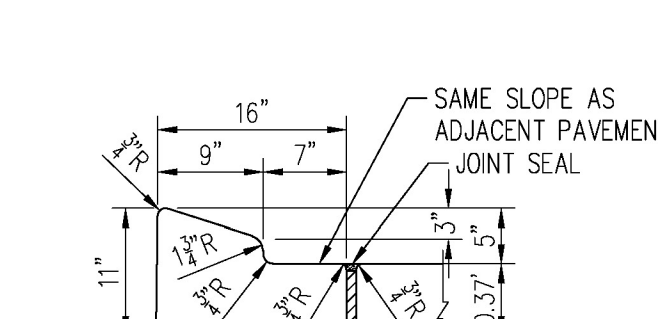


STRAIGHT END

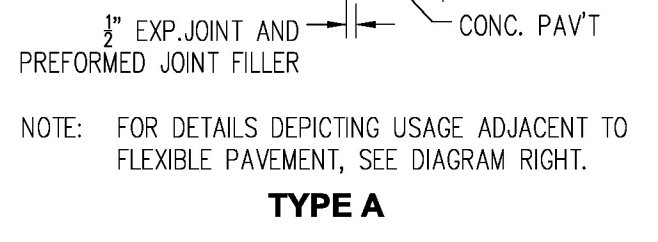


FLARED END CURB AND GUTTER TYPES E & F

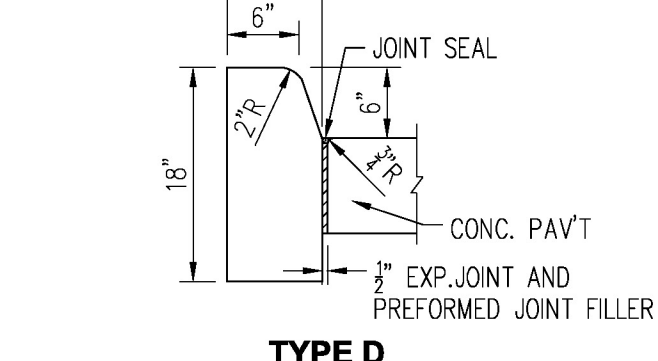
CURB AND GUTTER ENDINGS



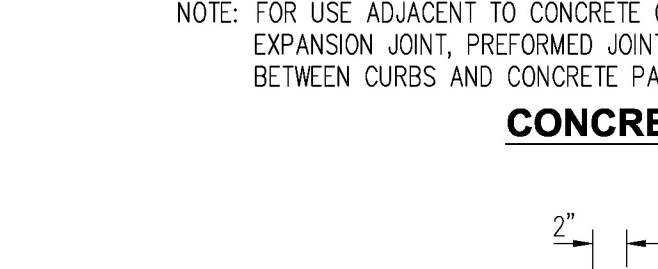
TYPE A



TYPE D



TYPE B



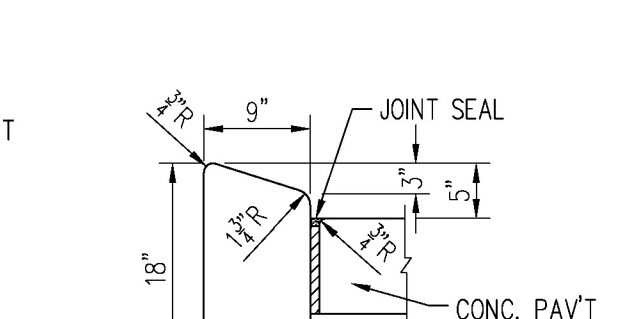
TYPE C



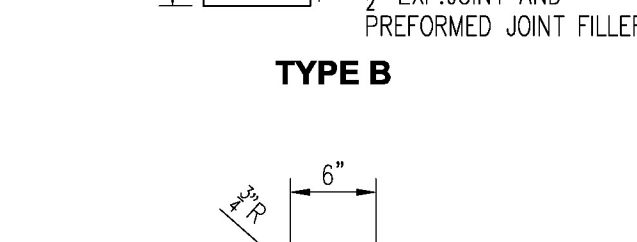
TYPE E



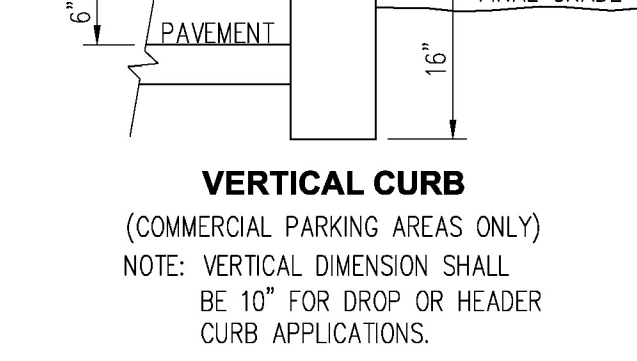
TYPE F



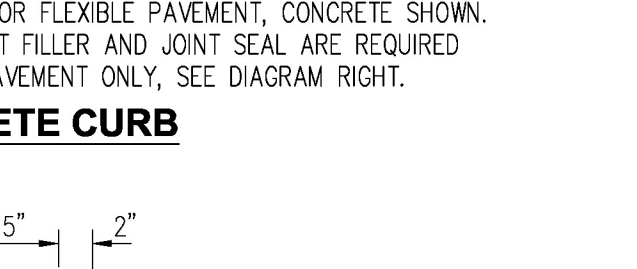
TYPE B



TYPE D



TYPE B



TYPE C

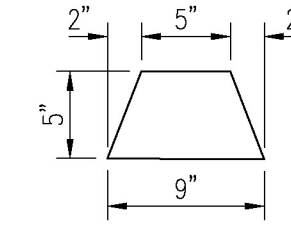


TYPE E

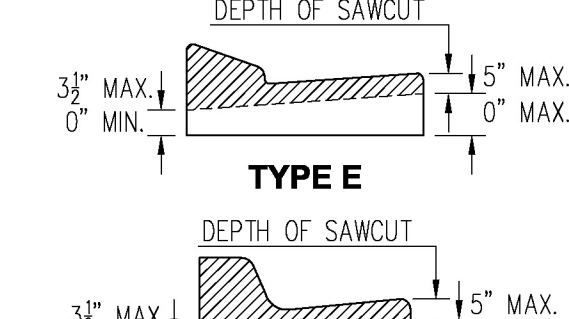


TYPE F

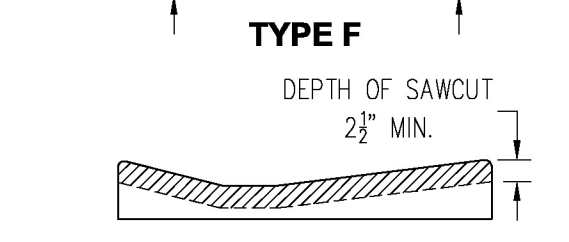
ASPHALTIC CONCRETE CURB



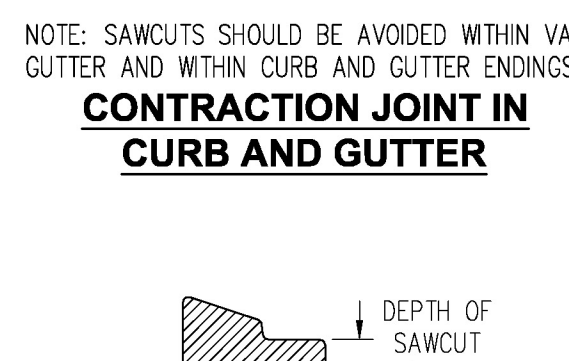
ASPHALTIC CONCRETE CURB



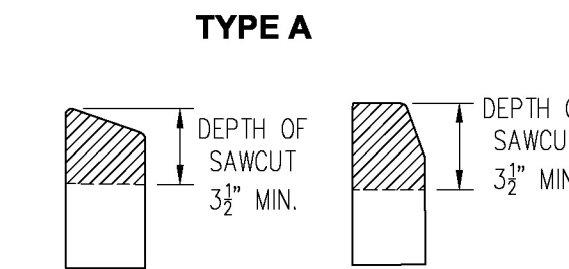
SHOULDER GUTTER



CONTRACTION JOINT IN CURB AND GUTTER



CONTRACTION JOINT IN CURB



CONTRACTION JOINT IN CURB

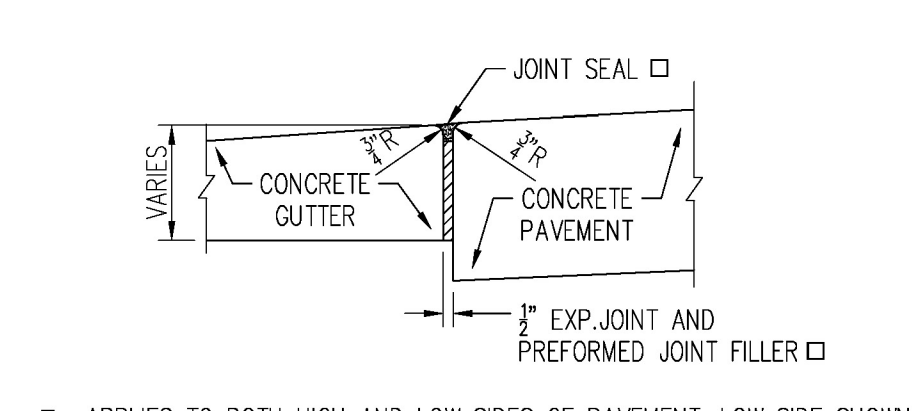


CONTRACTION JOINT IN CURB

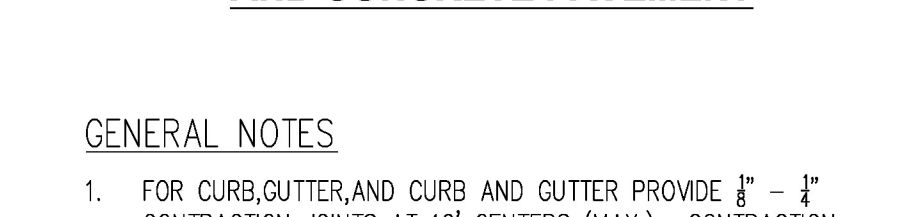


CONTRACTION JOINT IN CURB

Δ - APPLIES TO BOTH HIGH AND LOW SIDES OF PAVEMENT, LOW SIDE SHOWN.
CURB & GUTTER AND TYPE A CURB ADJACENT TO FLEXIBLE PAVEMENT

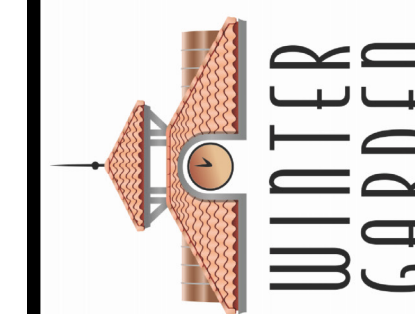


□ - APPLIES TO BOTH HIGH AND LOW SIDES OF PAVEMENT, LOW SIDE SHOWN.
EXPANSION JOINT BETWEEN GUTTER AND CONCRETE PAVEMENT



GENERAL NOTES

- FOR CURB, GUTTER, AND CURB AND GUTTER PROVIDE $\frac{1}{4}$ " - $\frac{1}{2}$ " CONTRACTION JOINTS AT 10' CENTERS (MAX.). CONTRACTION JOINTS ADJACENT TO CONCRETE PAVEMENT ON TANGENTS AND FLAT CURVES ARE TO MATCH THE PAVEMENT JOINTS, WITH INTERMEDIATE JOINTS NOT TO EXCEED 10' CENTERS. CURB, GUTTER AND CURB & GUTTER EXPANSION JOINTS SHALL BE LOCATED IN ACCORDANCE WITH SECTION 520 OF THE STANDARD SPECIFICATIONS.
- ENDS OF CURBS TYPES B AND D SHALL TRANSITION FROM FULL TO ZERO HEIGHTS IN 3 FEET.



OPTION "A"

OPTION "B"

EXCEPT AS INDICATED BELOW FOR SHORT LENGTHS, EACH SECTION OF PIPELINE SHALL BE THOROUGHLY CLEANED WITH ONE POLYURETHANE FOAM PIG EACH TIME.

A CITY REPRESENTATIVE SHALL BE PRESENT AT THE TIME OF INSERTION AND EXIT OF THE PIGS. LINES SHALL BE PIGGED AND/OR FLUSHED UNTIL THE WATER RUNS CLEAN AND IS APPROVED BY THE CITY REPRESENTATIVE. THE CITY REPRESENTATIVE SHALL BE GIVEN 48 HOURS MINIMUM NOTICE PRIOR TO PIGGING OR FLUSHING.

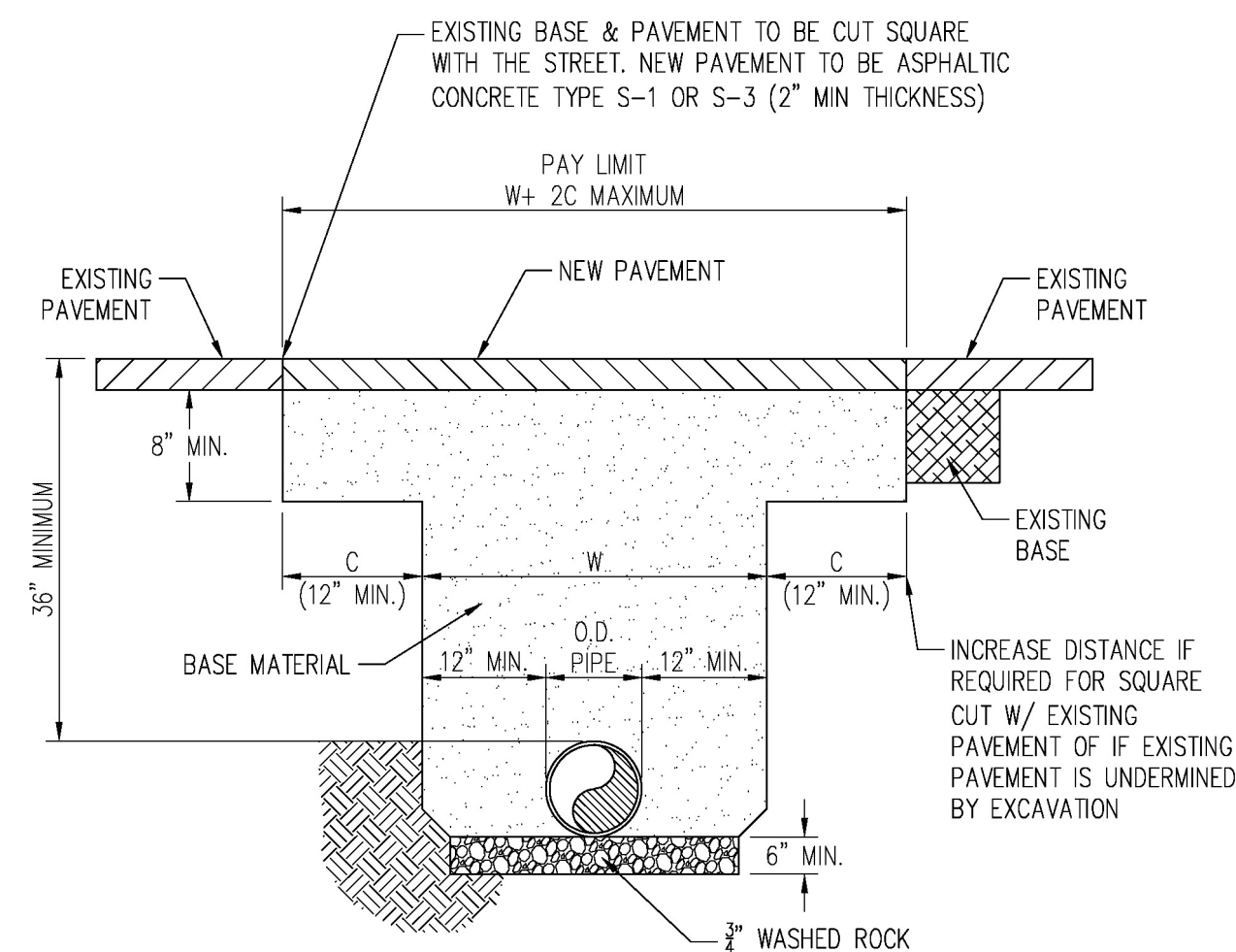
ON SHORT LENGTHS OF PIPELINE (100' MAX) CLEANING MAY BE ACCOMPLISHED BY FLUSHING WITH WATER AT A MINIMUM VELOCITY OF 2.5 FEET PER SECOND. WATER REQUIRED FOR TESTING AND CLEANING SHALL BE SUPPLIED BY THE CITY AT THE CONTRACTOR'S EXPENSE. WATER SHALL BE FROM A POTABLE SOURCE SATISFACTORY TO THE CITY.

NOTES:

1. REDUCER TO BE NEW MAIN SIZE PLUS 2" LARGER.
2. WYE TO BE PLUGGED AND RESTRAINED AT THE END OF PIGGING.
3. AT THE END OF THE PROJECT, ALL CORPORATIONS TO BE REMOVED AND CORPORATION PLUGS TO BE INSTALLED.
4. SAMPLE POINT TO BE LOCATED AFTER BACKFLOW PREVENTER.
5. ALL MATERIALS, PIPE, AND FITTINGS SHALL CONFORM THE THE CITY OF WINTER GARDEN STANDARDS.
6. INSTALL REDUCER WITH PIG INSIDE. ONLY ONE PIG WILL BE ALLOWED TO BE RUN THROUGH THE MAIN AT A TIME. PIPE EXTENSION CAP MAY BE REQUIRED.
7. PIGGING PROCEDURE TO BE PERFORMED AT LEAST TWICE.

1 PIPE PIGGING DETAIL

N.T.S.



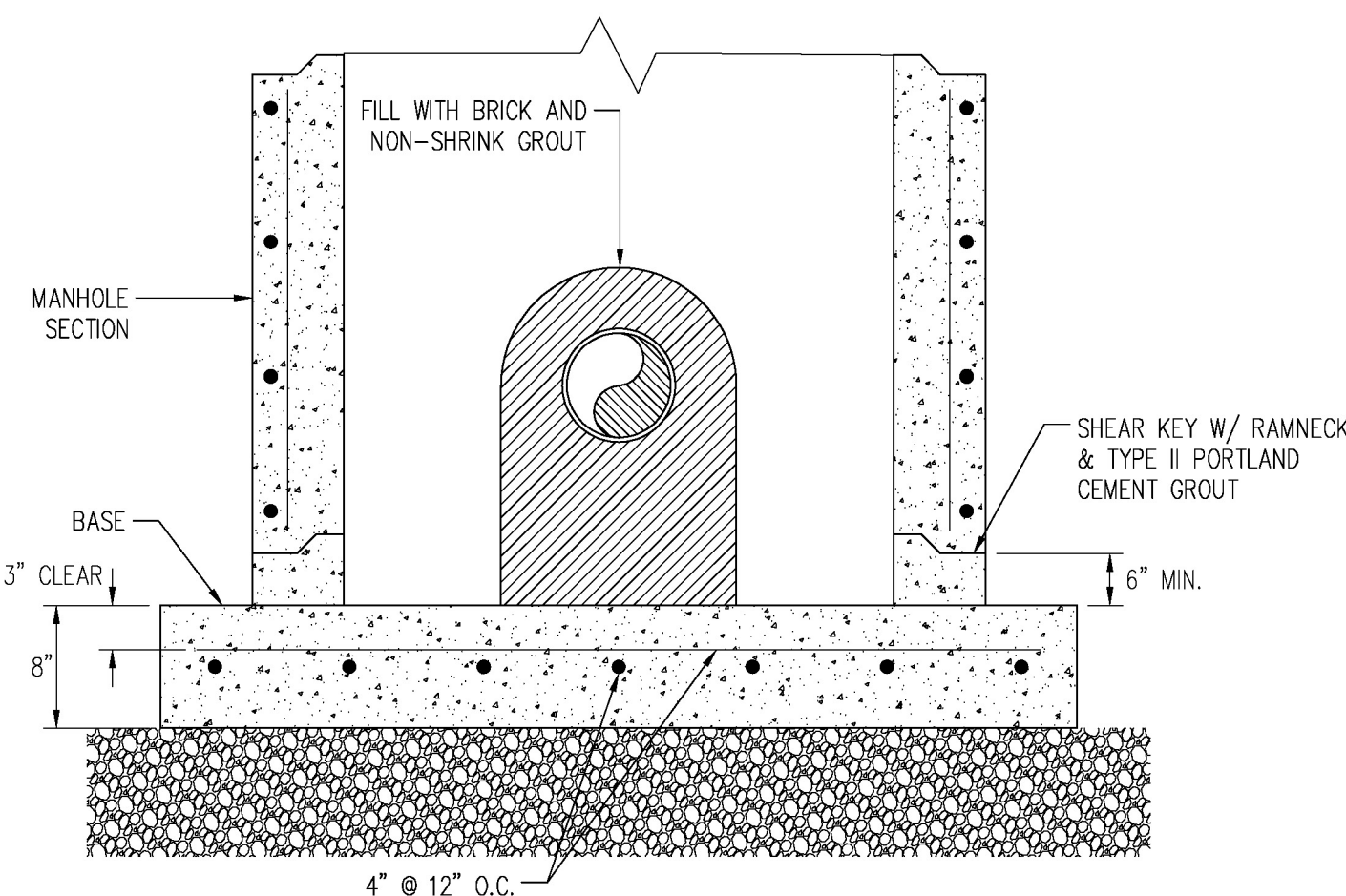
W = O.D. OF PIPE + 12" MIN. AT BOTH SIDES OF PIPE

C = VARIES W/ SOIL TYPE
(CONTACT ENGINEER OF RECORD FOR DETERMINATION IN THE FIELD)

NOTE:
ALL BACKFILL COMPACTION SHALL BE 98% OF MAXIMUM DENSITY.

PAVEMENT RESTORATION DETAIL

N.T.S.

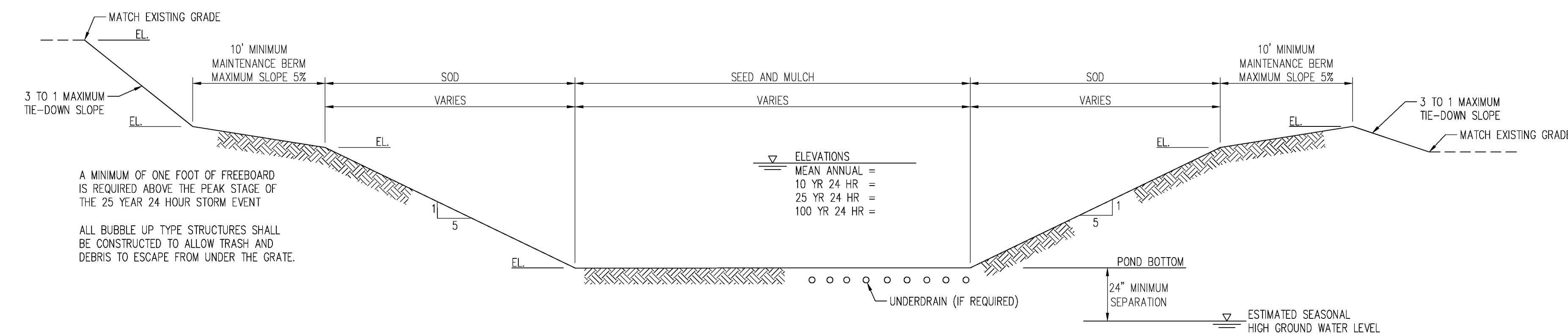


NOTES:

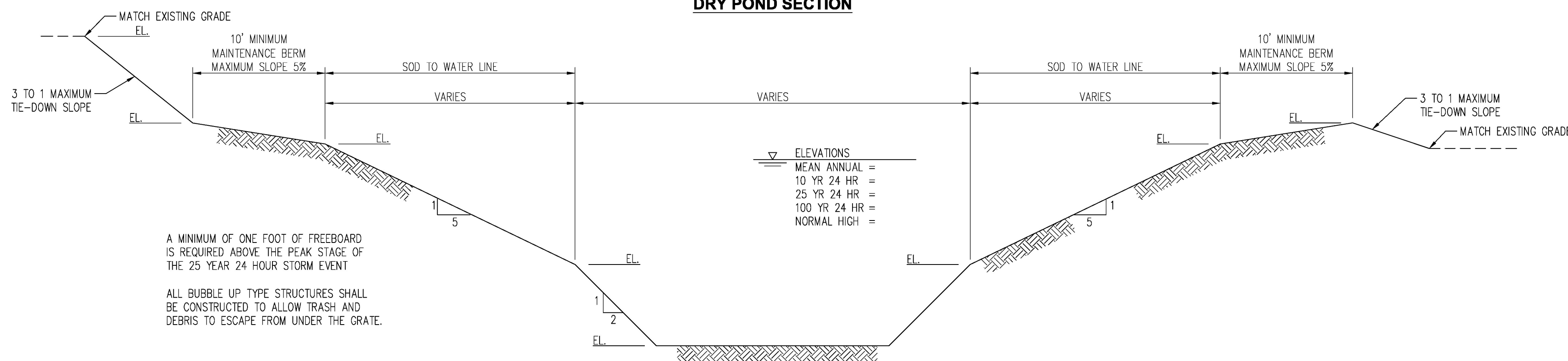
1. TO CONSTRUCT NEW MANHOLE OVER EXISTING SEWER, SLIDE BASE UNDER PIPE AND SET MANHOLE SECTION ON TOP.
2. FOR ADDITIONAL DETAILS NOT SHOWN, SEE "GRAVITY SEWER MANHOLE STANDARD."
3. AT THE END OF THE PROJECT, ALL CORPORATIONS TO BE REMOVED AND CORPORATION PLUGS TO BE INSTALLED. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPORT OF EXISTING SEWER DURING INSTALLATION OF MANHOLE.

3 GRAVITY SEWER DOGHOUSE MANHOLE

N.T.S.



DRY POND SECTION



WET POND SECTION

4 POND SECTIONS

N.T.S.

WINTER GARDEN STANDARDS INCORPORATED WITH DESIGN ENGINEERS DOCUMENTS.

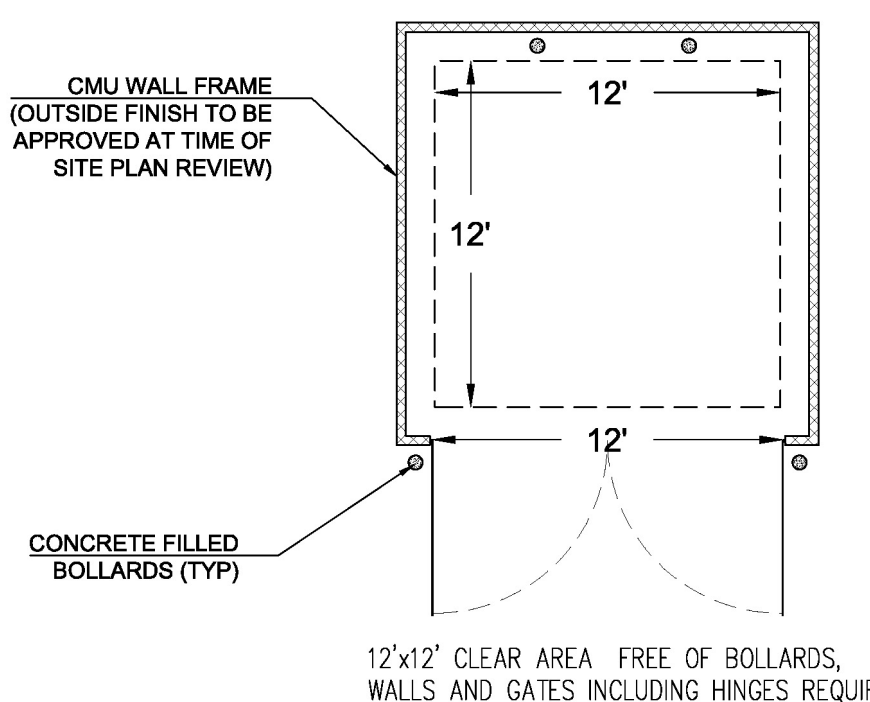
THE DETAILS, NOTES AND SPECIFICATIONS SHOWN ON THIS SHEET REPRESENT THE NOTED STANDARDS OF THE CITY OF WINTER GARDEN FOR CONSTRUCTION OF PUBLIC WORKS AND UTILITY INFRASTRUCTURE. BY INCLUDING THE STANDARDS, THE DESIGN ENGINEER HAS ACKNOWLEDGED THAT THEY ARE EFFECTIVE TO THE PROJECT AND THAT DETAILS, NOTES, OR SPECIFICATIONS ARE AS PROVIDED BY THE CITY AND HAVE NOT BEEN REVISED OR MODIFIED WITHOUT WRITTEN APPROVAL FROM THE CITY ENGINEER OR UTILITY DIRECTOR.



THE BACKGROUND COLOR SHALL BE RETROREFLECTIVE GREEN AND THE LETTERING AND BORDER SHALL BE RETROREFLECTIVE WHITE.

STREET SIGN BLADE DETAIL

N.T.S



7 DUMPSTER LAYOUT DETAIL

N.T.S.

