



Jones Gillam Renz Architects

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ARCHITECT’S SUPPLEMENTAL INSTRUCTIONS

JONES GILLAM RENZ DOCUMENT JGR 710

PROJECT:	The Reserves at Cobalt Circle New Development Brownsville, TN	Report No.	Ten (10)
OWNER:	OPG Cobalt Circle Partners, LLC Dan Maximuk 250 N. Santa Fe Ave, Suite A Salina, KS 67401	Date	February 23, 2026
CONTRACTOR:	MCP Group 3501 SW Fairlawn Rd. Topeka, KS 66614	Architect's Proj No.	24-3446
		Contract For:	General Construction Mechanical, Electrical

The work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Prior to proceeding in accordance with these instructions, indicate your acceptance of these instructions for minor change to the Work as consistent with the Contract Documents and return a copy to the Architect.

DESCRIPTION:

Contractor to make adjustments as needed and required per the modifications as indicated on attached drawings and in the below descriptions:

1. TDOT Permit Plans attached.

Attachments:

1. TDOT Permit Plans: Cover Sheet, Revised Grading and Drainage Plan, Revised Site Paving Plan, Grading & Drainage Details.

Issued by: Jones Gillam Renz Architects PO Box 2928, Salina, KS 67402
Maggie Gillam, Project Manager 785-827-0386 mgillam@jgrarchitects.com

Copies to:

MCP Group – Mike Maas, Cliff Holland, Tim Johnson, Kelli Meiers
OPG - Dan Maximuk, Amanda Klaus, Austin Kack
JGR Team - Maggie Gillam (JGR), Ryan Lies (LST), Cindy Senecal (McClure), Wesley Wooldridge (Renaissance), Michael Boerst (Heartland Energy)

PERMIT COVER SHEET

NOTE: FAILURE TO COMPLY WITH THIS NOTE CAN RESULT IN FORFEITURE OF YOUR BOND.

CONTACT BURTON HATCH TDOT TEAM LEAD AT JACKSON, PRIOR TO BEGINNING WORK, AND ALSO FOR QUESTIONS OR CONCERNS DURING THE CONSTRUCTION PHASE (PH# 731-694-6673). ONCE ALL WORK HAS BEEN COMPLETED, THE PERMITEE SHALL REQUEST A FINAL INSPECTION THROUGH THE ONLINE ACCELA PERMIT DATABASE. THE DEVELOPER WILL BE RESPONSIBLE FOR ANY CONFLICTS WITH UTILITIES THAT ARE LOCATED WITHIN THE HIGHWAY RIGHT-OF-WAY AND SHALL NOTIFY THE RESPECTIVE OWNERS AND ARRANGE FOR ANY ALTERATIONS NECESSARY. ANY REARRANGEMENT OF UTILITIES SHALL BE IN ACCORDANCE WITH THE TENNESSEE D.O.T. POLICIES FOR ACCOMODATING UTILITIES WITHIN STATE HIGHWAY RIGHT-OF-WAY.

NOTE: CALL BURTON HATCH 7 DAYS PRIOR TO WORKING IN RIGHT-OF-WAY FOR A SMARTZONE POST ON 511. THE NUMBER IS (731) 694-6673.

NOTE: USE TDOT STANDARD DRAWINGS D-SEW-1A, D-PE-24A, & MM-SW-1

NOTE: INSTALL 36" STOP SIGN R1-1

DESIGN APPROVED

DATE 02/03/2026



REGIONAL TRAFFIC ENGINEER

Typical Pavement Sections

Asphalt Pavement*	Concrete Pavement
1 1/4" Surface (D Mix)	8" Concrete
2" Binder	10" Aggregate Base
4" A Mix	
10" Base Stone	

*For AADTs less than 10,000, use PG64-22
For AADTs greater than 10,000 use PG70-22

**Must be Constructed and
Maintained ADA Compliant**

PERMITEE:	S.R. 19	SCALE:	DESIGN BY:	DWG. NO.
OPG Cobalt Circle Partners, LLC 254 N Santa Fe Avenue Ste A Salina, KS 67401	Haywood Co.	Per Plans	D.R.	HWAY-25-000121 IV-38-19(R)13.44 35° 34' 57.19" N 89° 14' 03.44" W

Driveway Permit

SPECIAL NOTES

1. All newly cut and fill areas lacking adequate vegetation shall be sodded or if approved by the TDOT DMS shall be fertilized, mulched and seeded to effectively control soil erosion.
2. Concrete curbing and or curb and gutter: When forms are set and reinforcing steel is installed, an inspection shall be made by the TDOT District Maintenance Superintendent prior to concrete placement.
3. When base material has been properly compacted, and inspection shall be made by the TDOT District Maintenance Superintendent prior to the placement of Portland cement concrete surface and/or the asphalt concrete surface.
4. All work shall be in accordance with the latest TDOT Specifications and Special Provisions.
5. Any existing pavement, curbing, or sidewalk that is damaged by whatever means shall be replaced.
6. It shall be the responsibility of the developer to determine the adequacy of the drainage system. Post development runoff cannot exceed pre-development runoff.
7. It shall be the responsibility of the developer to ensure that a properly installed work zone is in place prior to beginning construction. The work zone shall be accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD), latest edition.
8. If in the course of construction a plans revision is necessitated, the developer shall request such and shall not proceed further until the revised drawing with all proper signatures is received by the developer.

Right of Way Encroachment

9. No part of the highway right-of-way shall be used for servicing vehicles, displays, or the conducting of private business. The buffer area is to be kept clear of buildings, fences, business signs, parking areas, service equipment and appurtenances thereto. Parking may be permitted along the roadway at curbs on city streets; when permitted by the local municipal governments. The buffer area may be graded and landscaped as approved by the Tennessee Department of Transportation.

Buffer Areas

In development of private property and the construction of driveways thereto, it may be necessary to re-grade the buffer area by cutting or filling. Such work shall be done in a manner to insure adequate sight distance for traffic operations, proper drainage, suitable slopes for maintenance operations, and good appearance. The buffer area outside the driveway should be treated to prevent use by vehicles. This may accomplished by grading, the use of curbs, rails, guide posts, low shrubs ect., in a manner that will not impair clear sight across the area.

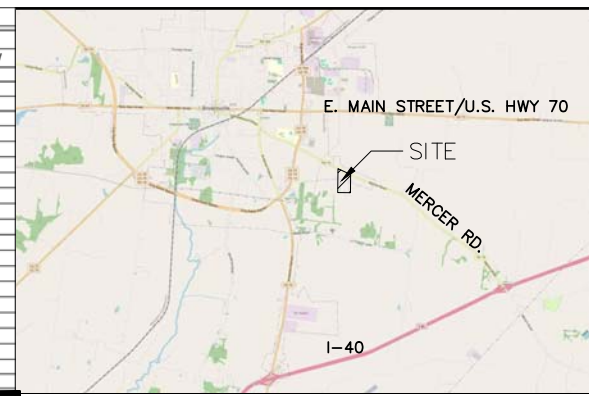
10. All joints shall be sawed. To install new driveway(s) first saw thru curb at 90 degrees to the center line. Next, saw along the face of curb in the gutter line a minimum depth of 4 inches. Finally break curb, away from integral curb and gutter. The new driveway(s) is now ready to be constructed as shown on attached detail.
11. Cement concrete curb, gutter or combined curb and gutter shall be constructed in accordance with TDOT Specifications: Sec 702. Concrete Curb, Gutter, or Combined Curb and Gutter Shall be constructed in sections having uniform lengths of 10 feet, the length of these sections may be reduced where necessary for closures, but no sections less than 6 foot will be permitted (SEC702.8).
12. Additionally, as of March 10, 2003, operators of construction sites involving clearing, grading or excavation that result in an area of disturbance of one or more acres, and activities that result in the disturbance of less than an acre if it is part of a larger common plan of development of sale are REQUIRED to obtain a National Pollutant Discharge Elimination (NPDES) General Permit for Construction Storm-water. The Permittee must contact the following Environmental Assistance Center (EAC) of the Tennessee Department of Environment and Conservation (TDEC):

Jackson EAC
1625 Hollywood Drive
Jackson, TN 38305
Phone: (731) 512-1300 Fax: (731) 661-6283

LEGEND	
PROPOSED MINOR CONTOUR	---
EXISTING MINOR CONTOUR	---
PROPOSED MAJOR CONTOUR	---
EXISTING MAJOR CONTOUR	---
EX. EDGE OF PAVEMENT	---
PROPERTY LINE	---
RIDGE LINE	---
FLOW LINE	---
TP	TOP OF PAVEMENT
TC	TOP OF CURB/CONC.
TC/TP	TOP OF CONCRETE/TOP OF PAVEMENT
B/SW	BACK OF SIDEWALK
FL	FLOW LINE
D.A.	DRAINAGE AREA
Q10	DISCHARGE OF 10 YR. DESIGN STORM
HP	HIGH POINT
FG	FINISH GRADE
FFE	FINISHED FLOOR ELEV.

▲ - GROUND DRAINAGE DIRECTION

THE RESERVES AT COBALT CIRCLE										ASBULT	
NO	TYPE	DA (AC)	Q25 (CFS)	TGRIM	FL IN	FL IN	FL IN	FL IN	FL OUT	INV. ELEV	RIM ELEV
1	TYPE 'D' HEADWALL	NA	NA	NA	373.00					373.00	
2	NO 11 INLET	0.16	1.25	377.18	373.85			373.10		373.10	
2A	NO 11 INLET	0.10	0.57	378.70	374.20					374.20	
2B	NO 11 INLET	0.08	0.51	379.60	374.92					374.92	
3	NO 11 INLET	0.10	0.78	377.50	373.80					373.80	
4	NO 11 INLET	0.33	2.51	377.80	373.98					373.98	
5	Ø DIA D/MH	NA	NA	381.15	375.40			374.65		374.65	
5A	NO 11 INLET	0.08	0.51	380.60	375.71					375.71	
5B	NO 11 INLET	0.08	0.51	380.50	375.98					375.98	
5C	NO 11 INLET	0.37	1.83	381.60	376.28					376.28	
6	NO 11 INLET	0.16	1.25	379.30	375.39					375.39	
7	NO 11 INLET	0.33	2.53	378.40	376.02					376.02	
8	3'x3' INLET	0.95	4.18	378.50	373.25					373.25	
9	TYPE 'D' HEADWALL	NA	NA	375.75	373.25					373.25	
10	NO 10 INLET	0.06	0.38	379.45	376.55					376.55	
11	NO 10 INLET	0.18	0.86	379.72	377.25			374.50		374.00	
11A	NO 10 INLET	0.06	0.42	379.73	377.40					377.40	
12	NO 10 INLET	0.61	2.44	379.73	378.05			377.55		375.29	
12A	NO 10 INLET	0.05	0.34	379.70	378.20					378.20	
13	NO 10 INLET	0.83	3.32	380.50	375.72			376.22		375.72	
13A	NO 10 INLET	0.06	0.38	380.00	376.40					376.40	
14	NO 10 INLET	0.90	3.90	380.73	379.05			377.00		376.75	
14A	NO 10 INLET	0.06	0.42	380.73	379.15					379.15	
15	NO 10 INLET	0.74	2.96	380.90	377.81					377.56	
16	NO 10 INLET	0.04	0.28	380.73	379.25					378.00	
17	TYPE 'D' HEADWALL	NA	NA	NA	372.20					372.20	
18	O.C.S.	6.42	19.13	NA	372.50					372.50	
19	*TDOF D-SBW-1A/D-PE-24A	NA	NA	NA	374.80					374.80	
20	*TDOF D-SBW-1A/D-PE-24A	NA	NA	NA	375.56					375.56	



GENERAL NOTES (CITY OF BROWNSVILLE)

- A MINIMUM OF 24-HOURS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY OF BROWNSVILLE PUBLIC WORKS OFFICE AT (731) 772-9978.
- ALL NEWLY CUT OR FILLED AREAS, LACKING ADEQUATE VEGETATION, SHALL BE SEED, MULCHED, FERTILIZED AND/OR SODDED AS REQUIRED TO EFFECTIVELY CONTROL SOIL EROSION.
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT NECESSARILY ALL OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE UTILITY COMPANIES WHICH MAINTAIN A UTILITY LINE WITHIN THE BOUNDARIES OF THE PROJECT PRIOR TO THE INITIATION OF ANY CONSTRUCTION ON THE PROJECT OR IN THE STREETS BORDERING THE PROJECT. THE CONTRACTOR SHALL ALSO ASSUME FULL RESPONSIBILITY FOR DAMAGE TO ANY UTILITIES ENCOUNTERED WITHIN CONSTRUCTION PERIMETERS, WHETHER SHOWN ON THE CONSTRUCTION PLANS OR NOT, DURING THE WORK ON THE PROJECT. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.
- ALL FILL SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D-698) WITHIN 3% OF OPTIMUM MOISTURE CONTENT IN LIFTS NOT TO EXCEED SIX (6) INCHES OF COMPACTED THICKNESS.
- ALL CONSTRUCTION MATERIALS AND PROCEDURES SHALL MEET OR EXCEED THE REQUIREMENTS OF THE CITY OF BROWNSVILLE STANDARD CONSTRUCTION SPECIFICATIONS.
- PROPERTY LINES SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. GRADING, CLEARING AND THE ERECTION OR REMOVAL OF FENCES ALONG PROPERTY LINES SHALL BE FULLY COORDINATED WITH ADJACENT PROPERTY OWNERS.
- VERIFY SITE CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY THE CITY OF BROWNSVILLE PUBLIC WORKS OF ANY VARIATIONS PRIOR TO COMMENCEMENT OF WORK.
- ALL GRADING WORK SHALL BE PERFORMED IN SUCH A MANNER THAT ADJACENT PROPERTIES ARE NOT DAMAGED OR ADVERSELY AFFECTED.
- LOT DRAINAGE: FINISH GRADE SHALL BE SLOPED AWAY FROM THE FOUNDATION FOR DRAINAGE. THE FINISH GRADE MUST BE AT LEAST 12-INCHES BELOW THE TOP OF THE FOUNDATION WALL OR THE GRADE OF THE CONCRETE SLAB AT THE INTERIOR IN THE CASE OF AN INTEGRAL SLAB AND FOUNDATION. THE MINIMUM GRADE AWAY FROM THE FOUNDATION SHALL BE TWO PERCENT (2%) IN ALL DIRECTIONS. THE DRIVEWAY SHALL BE SLOPED DOWN AT TWO PERCENT (2%) FOR AT LEAST EIGHT FEET FROM THE STRUCTURE.



THE RESERVES AT COBALT CIRCLE										ASBULT											
FROM	INV.	TO	INV.	PIPE	MATERIAL	LEN	SLOPE	D.A.	DESIGN	CAPACITY	VEL.	VELOCITY	FROM	INV.	TO	INV.	PIPE	LENGTH	SLOPE	CAPACITY	
ELEV	ELEV	ELEV	ELEV	DI (IN)	(FT)	(%)	(AC)	Q25	QC (CFS)	(FPS)	FULL	(FPS)	ELEV	ELEV	ELEV	ELEV	DI (IN)	(FT)	(%)	Q (CFS)	
1	373.00	2	373.10	24	ADS HP STORM	20	0.50	2.73	14.98	17.33	6.21	5.52									
2	373.10	3	373.64	24	ADS HP STORM	109	0.50	2.4	13.90	17.25	6.11	5.46									
3	373.64	4	373.98	24	ADS HP STORM	66	0.50	2.3	13.12	17.33	6.06	5.52									
4	373.98	5	374.65	24	ADS HP STORM	132	0.51	1.97	10.61	17.46	5.82	5.56									
5	374.65	6	375.39	18	ADS HP STORM	97	0.51	1.44	7.96	8.09	5.21	4.58									
6	375.39	7	376.02	18	ADS HP STORM	126	0.50	1.28	6.71	8.05	5.10	4.56									
7	376.02	8	376.75	15	ADS HP STORM	89	0.51	0.95	4.18	4.98	4.54	4.05									
8	376.75	9	377.40	15	ADS N-12	71	0.50	0.17	1.08	4.93	2.85	4.02									
9	377.40	10	378.05	15	ADS N-12	72	1.00	0.08	0.51	7.00	3.29	5.70									
10	378.05	11	378.72	15	ADS N-12	63	0.50	0.53	2.85	4.93	4.08	4.02									
11	378.72	12	379.37	15	ADS N-12	54	0.50	0.45	2.14	4.95	3.87	4.03									
12	379.37	13	380.02	15	ADS N-12	55	0.51	0.37	1.63	4.99	3.62	4.07									
13	380.02	14	380.67	24	ADS N-12	107	0.51	3.73	16.14	17.57	6.34	5.59									
14	380.67	15	381.32	24	ADS N-12	59	0.42	3.67	15.76	15.95	5.78	5.08									
15	381.32	16	381.97	24	ADS N-12	61	1.21	3.43	14.48	26.99	6.73	6.59									
16	381.97	17	382.62	18	ADS N-12	42	1.02	2.77	11.70	11.51	7.43	6.52									
17	382.62	18	383.27	18	ADS N-12	103	1.00	1.82	7.62	11.38	6.90	6.44									
18	383.27	19	383.92	15	ADS N-12	56	1.00	0.77	3.24	7.00	5.59	5.70									
19	383.92	20	384.57	12	ADS N-12	15	1.27	0.04	0.28	4.34	3.04	5.53									
20	384.57	21	385.22	12	ADS N-12	23	0.85	0.06	0.42	3.12	2.74	3.97									
21	385.22	22	385.87	12	ADS N-12	26	0.58	0.05	0.34	2.93	2.46	3.73									
22	385.87	23	386.52	12	ADS N-12	21	0.86	0.12	0.76	3.57	3.23	4.55									
23	386.52	24	387.17	6	ADS N-12	13	0.77	0.06	0.42	0.53	1.57	2.72									
24	387.17	25	387.82	24	RCP	76	1.00	2.05	19.13	24.51	8.62	7.80									

* denotes 19'x28' Arch end pipe

STR. 13B HAS BEEN ELIMINATED.

SITE BENCHMARK
RIM OF EXISTING S.M.H. LOCATED IN THE CENTER OF EAST JEFFERSON STREET
ELEVATION: 381.76

FEMA FLOOD NOTE:
THE PROPERTY SHOWN HEREON DOES NOT GRAPHICALLY FALL WITHIN A SPECIAL DESIGNATED FLOODZONE PER FEMA FIRM MAP PANEL 47157C0185F, DATED 09/27/2007
ELEVATION: 381.76

FLEXAMAT STANDARD

PROPERTY DESCRIPTION

Mat Width & Length: Manufactured in standard widths of 4', 5.5', 8', 10', 12', 15.5' & 16'. Lengths can be cut to order per project requirements. Stocked lengths are 30', 40', & 50'. 4' x 4' mats stacked on pallets are also available.

Underlayment Options: Flexamat® Standard - a three-layered system, includes, in order from top to bottom, 1) Concrete block mat 2) 5-Pick Leno Weave and 3) Curlex® II. Flexamat® Plus - a four-layered system includes, in order from top to bottom, 1) Concrete block mat 2) 5-Pick Leno Weave 3) Recyclex TRM-V and 4) Curlex® II. Flexamat® 10NW - A two-layered system, includes, 1) Concrete block mat 2) 10oz. non-woven geotextile cast onto the back of the blocks, adhered to the concrete block.

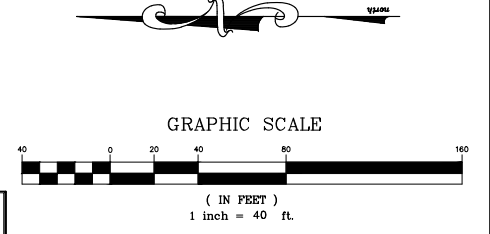
Weight per Square Foot: 10 lbs per square foot

Block Size: The concrete blocks are 6.5" x 6.5" x 2.25". There is 1.5" spacing between the blocks.

Limiting Shear: 24+ PSF (non vegetated)

Limiting Velocity: 30+ ft./second (non vegetated)

ACREAGE SUMMARY	
EX. IMPERVIOUS SURFACE	0.12 ACRES
EX. PERVIOUS SURFACE	5.00 ACRES
IMPERVIOUS SURFACE AT COMPLETION	2.13 ACRES
PERVIOUS/SEEDDED AREA AT COMPLETION	2.99 ACRES
TOTAL AREA	5.12 ACRES



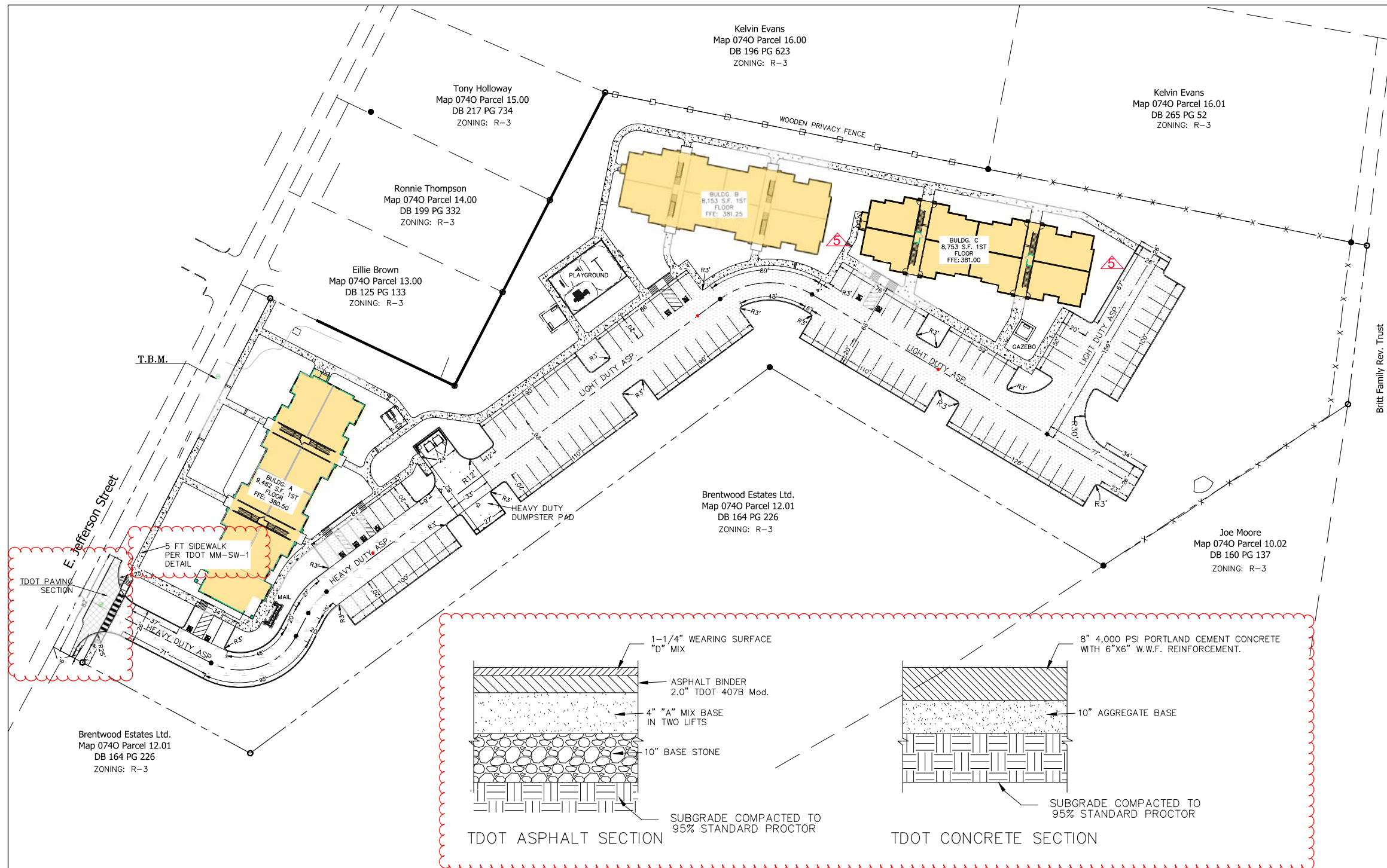
REVISION

ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE
ASI #2		10/25
ASI #5		12/05/25
RFI #28		01/05/25

THE RESERVES AT COBALT CIRCLE
BROWNSVILLE, TN.
DEVELOPER:
ENGINEER: RENAISSANCE GROUP, INC.

DIVISION OF ENGINEERING
GRADING & DRAINAGE PLAN
LOCATION: 1616 EAST JEFFERSON STREET
BROWNSVILLE, TN.

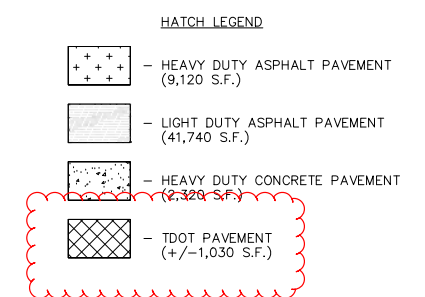
SURVEY: SEAS _____ DATE: 01/25/25 _____ DATE: 01/25/25 _____ SCALE: 1" = 40'
DESIGN: _____ DATE: 01/25/25 _____ DATE: 01/25/25 _____ SCALE: 1" = 40'
DEPUTY CITY ENGINEER _____ DATE _____ CITY ENGINEER _____ DATE _____



VICINITY
MAP
NOT TO SCALE

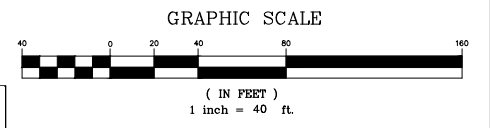
FINAL SITE DATA	
TOTAL SITE AREA (LOT 1):	222,854 S.F. (5.12 AC.)
TAX MAP, PARCEL NUMBER	MAP 0740, PARCEL 012.00
NUMBER OF UNITS	72 APT. UNITS
MAXIMUM BLDG. HEIGHT: PRO. MAX BLDG. HEIGHT:	75 FT 45.33FT (4 STORY APARTMENT)
BUILDING SETBACKS: FRONT SIDE REAR	40 FT. 30 FT. 30 FT.
OPEN SPACE REQUIREMNT: PRO. OPEN SPACE:	40% MULTI FAMILY APARTMENTS
ZONING: LAND USE:	R-3 HIGH DENSITY RESIDENTIAL MULTI FAMILY APARTMENTS

Britt Family Rev. Trust
Map 0740 Parcel 55.00
DB 209 PG 812
ZONING: R-3

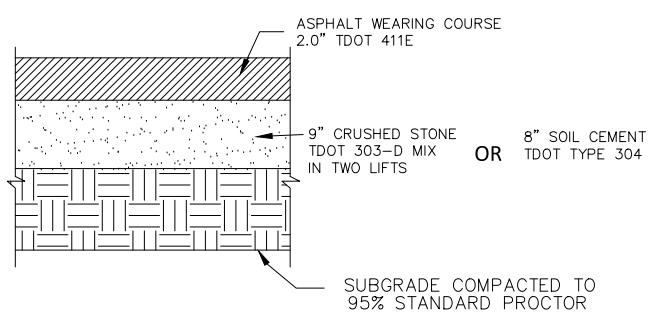
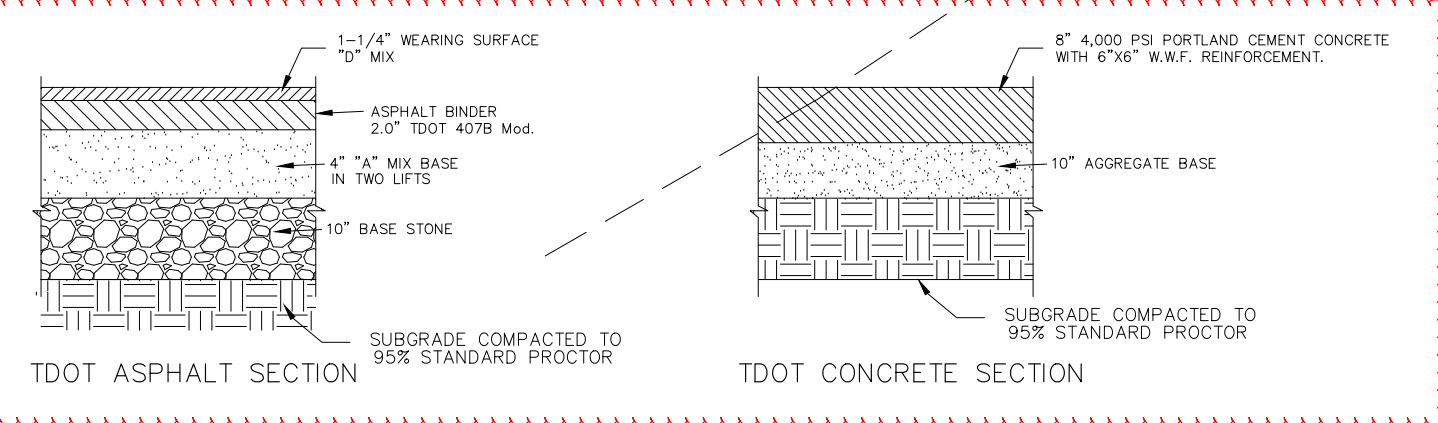


SITE BENCHMARK
RIM OF EXISTING S.M.H. LOCATED IN THE CENTER OF EAST JEFFERSON STREET ELEVATION: 381.76

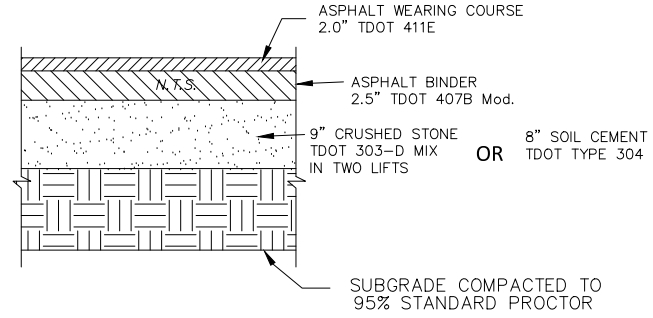
FEMA FLOOD NOTE:
The property shown hereon does NOT graphically fall within a special designated Floodzone per FEMA FIRM Map Panel 47157C0185F, Dated 09/27/2007.



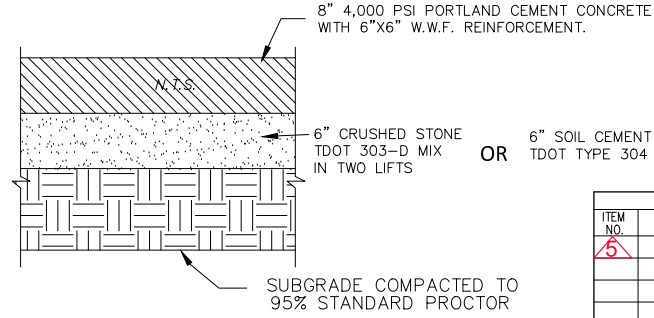
SHEET 2 OF 3



LIGHT DUTY
TYPICAL PAVEMENT DETAIL
N.T.S.

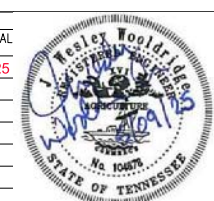


HEAVY DUTY
TYPICAL PAVEMENT DETAIL
N.T.S.



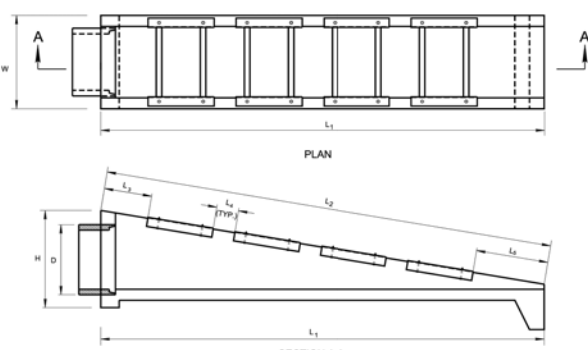
HEAVY DUTY CONCRETE
TYPICAL DUMPSTER PAD DETAIL
N.T.S.

REVISION		
ITEM NO.	DESCRIPTION OF CHANGE	APPROVAL DATE
5	ASI #5	12/05/25



THE RESERVES AT COBALT CIRCLE
BROWNSVILLE, TN.
DEVELOPER:
ENGINEER: RENAISSANCE GROUP, INC.

DIVISION OF ENGINEERING
SITE PAVING PLAN
LOCATION: 1616 EAST JEFFERSON STREET
BROWNSVILLE, TN.
DESIGN: _____ DATE: 01/25/24
SCALE: 1" = 40'
DEPUTY CITY ENGINEER _____ DATE _____ CITY ENGINEER _____ DATE _____



SIDE DRAIN DIA. (D)	DIMENSIONS AND QUANTITIES FOR ONE ENDWALL				
	CONCRETE ENDWALL DIMENSIONS		GRATE PLACEMENT DIMENSIONS		STRUCTURAL STEEL GRATE DIMENSIONS AND QUANTITY
H	W	L1	L2	L3	NO. REQ'D
18"	SEE STD. DWG. D-PE-15A	2'-0"	1'-0"	2'-1 1/2"	2
18"	SEE STD. DWG. D-PE-15A	2'-0"	1'-0"	2'-0"	2
24"	SEE STD. DWG. D-PE-24A	2'-0"	1'-0"	3'-0"	3
30"	SEE STD. DWG. D-PE-30A	2'-0"	1'-0"	3'-3 1/2"	4
36"	SEE STD. DWG. D-PE-36A	2'-0"	1'-0"	3'-6 1/2"	5
42"	SEE STD. DWG. D-PE-42A	2'-0"	1'-0"	4'-0"	6
48"	SEE STD. DWG. D-PE-48A	2'-0"	1'-0"	5'-0"	7

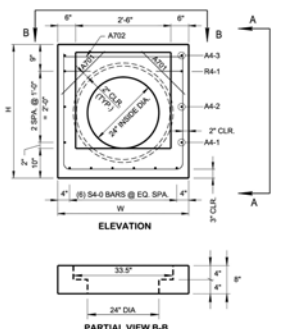
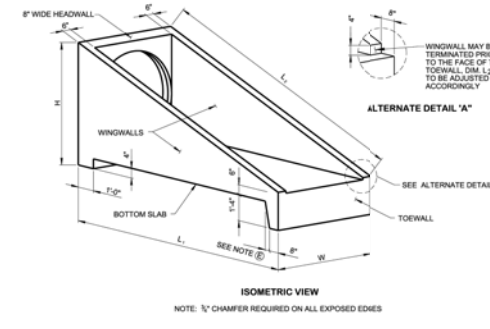
GENERAL NOTES

- DRAWING TO BE USED FOR ALL 12" THRU 48" SIDE DRAIN CONCRETE ENDWALLS. REFER TO THE FOLLOWING STANDARD DRAWINGS FOR CONSTRUCTION DIMENSIONS:
 12" ENDWALL - SEE D-PE-15A & D-PE-15B WITH 6:1 WINGWALL SLOPE
 18" ENDWALL - SEE D-PE-15A & D-PE-15B WITH 6:1 WINGWALL SLOPE
 24" ENDWALL - SEE D-PE-24A & D-PE-24B WITH 6:1 WINGWALL SLOPE
 30" ENDWALL - SEE D-PE-30A & D-PE-30B WITH 6:1 WINGWALL SLOPE
 36" ENDWALL - SEE D-PE-36A & D-PE-36B WITH 6:1 WINGWALL SLOPE
 42" ENDWALL - SEE D-PE-42A & D-PE-42B WITH 6:1 WINGWALL SLOPE
 48" ENDWALL - SEE D-PE-48A & D-PE-48B WITH 6:1 WINGWALL SLOPE
- SIDE DRAIN CONCRETE ENDWALL REQUIRES STEEL PIPE GRATE SHOWN ON THIS DRAWING. THE CONTRACTOR SHALL SUBMIT THE CONCRETE BLOCKOUT (1" x 7") AS SHOWN ON STANDARD DRAWING D-PE-99 SECTION D-D THRU WINGWALL AND SUBSTITUTE THE FOLLOWING REINFORCING BARS:
 30" ENDWALL - SUBSTITUTE A665 & A86 BY EXTENDING A665 TO 19'-0"
 36" ENDWALL - SUBSTITUTE A665 & A86 BY EXTENDING A665 TO 25'-0"
 42" ENDWALL - SUBSTITUTE A665 (2 BARS), A665 & A86 BY EXTENDING A665 TO 28'-0"
 48" ENDWALL - SUBSTITUTE A665 (2 BARS), A665 & A86 BY EXTENDING A665 TO 35'-0"
- THE MATERIALS, WELDING AND PAINTING FOR STRUCTURAL STEEL GRATE SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
 (1) ANGLES: ASTM A36
 (2) STEEL PIPE: ASTM A53 GRADE B, STANDARD WEIGHT (SW) OR ASTM A500 GRADE B AND SHALL BE GALVANIZED FOR 12" THRU 24" DIAMETER PIPE. CULVERT ASTM A53 GRADE B, DOUBLE EXTRA STRONG WEIGHT (XOS) - FOR 30" THRU 48" DIAMETER PIPE. CULVERT.
 (3) WELDING: AASHTOWMS D1.5M11.5 BRIDGE WELDING CODE (LATEST EDITION)
 (4) ALL STEEL GRATE SHALL BE GALVANIZED.
 (5) PIPES ARE TO BE VENTED PER GALVANIZATION REQUIREMENTS. HOLE SIZE AND LOCATIONS WILL BE DETERMINED BY GALVANIZER DURING THE APPLICATION.
 THE MATERIAL AND GALVANIZING FOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:
 (1) BOLTS, NUTS AND WASHERS: ASTM F1554 GRADE 36
 (2) GALVANIZING: ASTM A153
- PAYMENT WILL BE MADE UNDER ITEM NUMBERS:
 611-07-31 18" ENDWALL (SIDE DRAIN) EACH
 611-07-31 18" ENDWALL (SIDE DRAIN) EACH
 611-07-31 24" ENDWALL (SIDE DRAIN) EACH
 611-07-31 30" ENDWALL (SIDE DRAIN) EACH
 611-07-31 36" ENDWALL (SIDE DRAIN) EACH
 611-07-31 42" ENDWALL (SIDE DRAIN) EACH
 611-07-31 48" ENDWALL (SIDE DRAIN) EACH
- THE CONTRACTOR MAY ELECT TO SUBSTITUTE AN APPROVED ALTERNATIVE DESIGN.
- DIMENSIONAL AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE (SOP) 5-3.

REV. 1-10-12 REVISED ALTERNATE DETAIL FOR STRUCTURAL STEEL GRATE NOTE
 REV. 1-10-13 CHANGED REQUIREMENT FOR GRATE CHAMFER DETAIL
 REV. 6-18-13 REVISED NOTE (2) ADDED NOTE (2) AND (3)
 REV. 3-8-17 REVISED GENERAL NOTES ADDED FOOTNOTES TO TABLE
 REV. 10-28-19 REMOVED AND REDRAW SHEET
 REV. 10-18-20 REVISED SLOPE DIMENSION ADDED ANCHOR BOLT DETAIL AND REVISED IF PIPE GRATE IS PLACED INSIDE WINGWALL
 REV. 10-24-21 REVISED GENERAL NOTES (2) AND (3)
 REV. 10-28-21 ADDED GENERAL NOTE (2)

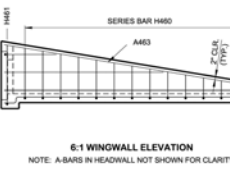
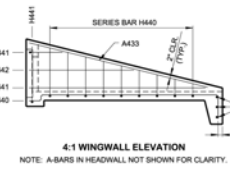
MINOR REVISION - FHWA APPROVAL NOT REQUIRED

STATE OF TENNESSEE
 STANDARD DRAWINGS
 DEPARTMENT OF TRANSPORTATION
 TYPE "SAFETY" SIDE DRAIN ENDWALL WITH STEEL PIPE GRATE FOR 12" THRU 48" PIPES, 6:1 SLOPE
 03-01-2012 D-SEW-1A



HEADWALL DETAILS

NOTE: INSTALL BARS A701 AT 45° SEE GENERAL NOTES (2) & (3)



GENERAL NOTES

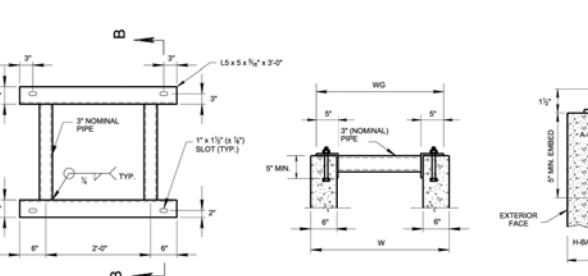
- DRAWING TO BE USED FOR ALL CAST-IN-PLACE AND ALL PRECAST 24" CONCRETE ENDWALLS (TYPE 1) FOR CROSS DRAINS ONLY. 1/2" ENDWALL TO BE PLACED AT 90° SHOT TO CENTERLINE. SEE STD. DWG. D-PE-99 FOR BRIDGE CONNECTION DETAIL. WHEN CROSS DRAIN IS NOT PERPENDICULAR TO CENTERLINE, CAST-IN-PLACE CONCRETE ENDWALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, SECTION 611 AND/OR SPECIAL PROVISIONS.
- SEE STD. DWG. D-PE-24B FOR BILL OF MATERIALS & PRECAST NOTES.
- 1" x 6" BAR DESIGNATION REPRESENTS 1, 4 OR 6 FOR 3:1, 4:1 OR 6:1 SLOPES, RESPECTIVELY. SEE STD. DWG. D-PE-24B.
- SPLICING OF REINFORCEMENT IS ACCEPTABLE PROVIDED THAT A MINIMUM 2' SPACING IS MAINTAINED.
- TOEWALL BACK SLOPE MAY BE CONSIDERED VARIABLE FROM VERTICAL UP TO 15°.
- 90° STEPS ARE SHOWN ON THE STEPPED HOLE DETAIL, HOWEVER MINOR VARIATIONS OF THE TAPER ARE ACCEPTABLE.
- OPTIONAL STEPPED HOLE OR HOLE FORMERS ARE ALLOWED PROVIDED THE AMOUNT OF COVER BETWEEN THE PIPE OPENING AND BARS A701 AND A702 IS THE SAME OR GREATER THAN SHOWN ON THIS DRAWING.
- PAYMENT WILL BE MADE UNDER:
 611-07-37 24" ENDWALL (CROSS DRAIN) 3:1 EACH
 611-07-38 24" ENDWALL (CROSS DRAIN) 4:1 EACH
 611-07-39 24" ENDWALL (CROSS DRAIN) 6:1 EACH
- THE CONTRACTOR MAY ELECT TO SUBSTITUTE AN APPROVED ALTERNATIVE DESIGN.
- DIMENSIONAL AND REINFORCING TOLERANCES WILL BE AS SHOWN IN STANDARD OPERATING PROCEDURE (SOP) 5-3.

SLOPE	CONCRETE ENDWALL DIMENSIONS				ESTIMATED QUANTITIES	
	H	L1	L2	W	CLASS "A" CONC. CU. YD.	STEEL BAR REINF. LB.
3:1	8'-0"	8'-10"	3'-0"	1.28	124	
4:1	11'-0"	11'-4"	3'-0"	1.61	153	
6:1	18'-2"	18'-4"	3'-0"	2.26	215	

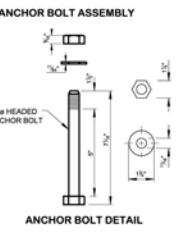
REV. 6-14-13 REVISED NOTES ADDED NOTE (2) AND (3)
 REV. 6-15-13 REVISED HOLE OPENING SIZE. ADDED STEPPED HOLE DETAIL
 REV. 12-1-16 REVISED GENERAL NOTES (2) AND (3)
 REV. 10-17-20 REVISED GENERAL NOTES (2) AND (3)
 REV. 10-28-19 ADJUSTED A.A. 8.8 AND SELECTION VIEWS. REMOVED AND REDRAW SHEET.

MINOR REVISION - FHWA APPROVAL NOT REQUIRED

STATE OF TENNESSEE
 STANDARD DRAWINGS
 DEPARTMENT OF TRANSPORTATION
 TYPE "U" CROSS DRAIN ENDWALL FOR 24" PIPE (FOR 3:1, 4:1 & 6:1 SLOPES)
 03-01-2012 D-PE-24A



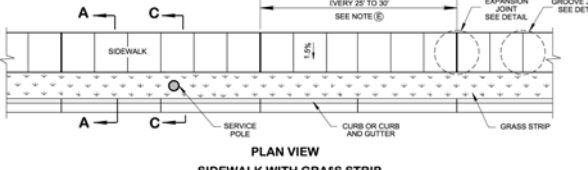
STEEL PIPE GRATE



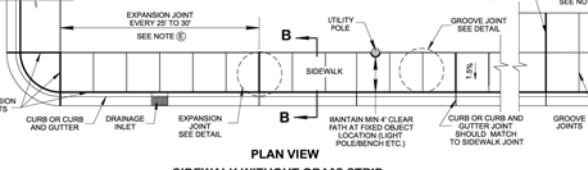
ALTERNATE ANCHORS FOR STRUCTURAL STEEL GRATES

CERTIFICATION: DRILLED-IN EPXY ANCHORS OR CAST-IN THREADED INSERTS MAY BE UTILIZED IN LIEU OF CAST-IN HEADED ANCHOR BOLTS PROVIDED THAT THE CONTRACTOR FURNISHES CERTIFIED ANCHOR PULL OUT DATA FROM AN INDEPENDENT TESTING LABORATORY USING CLASS "A" CONCRETE AS PRESCRIBED BY TENNESSEE HIGHWAY SPECIFICATIONS. THE REQUIRED ULTIMATE LOAD FOR 1/2" DIAMETER ANCHORS IS 10,000 POUNDS.

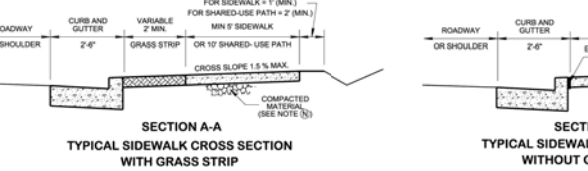
NOT TO SCALE



TYPICAL SIDEWALK CROSS SECTION WITH GRASS STRIP



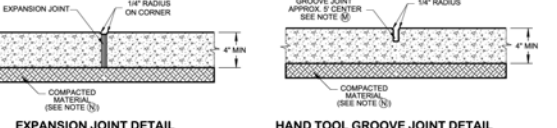
TYPICAL SIDEWALK CROSS SECTION WITHOUT GRASS STRIP



MAILBOX DETAIL

NOTE: EDGE OF MAILBOX SHALL NOT OVERHANG BEYOND THE BACK OF THE CURB. NOR SHALL THE MAILBOX OVERHANG THE SIDEWALK SUCH THAT THE USABLE WIDTH IS LESS THAN 4 FEET.
 IF NEEDED, REMOVAL AND RESETTING MAILBOXES TO BE INCLUDED IN THE COST OF SIDEWALK.

NOTE: IF SERVICE POLE IS PLACED IN GRASS STRIP THE POLE SHALL HAVE MIN. 7' OFFSET FROM TRAVELLED LANE. MINIMUM 30" DIAMETER AND 10' DEEP FOUNDATION SPACE SHALL BE EVALUATED TO ELIMINATE CONFLICTS. SEE STANDARD TRAFFIC OPERATION DRAWINGS T-50-9 AND T-50-10 FOR MORE INFORMATION.
 SERVICE APPURTENANCES (LARGE SIGN STRUCTURES, SIGNAL, LIGHTING AND UTILITY POLES > DIAMETER OR LARGER) SHALL BE PLACED OUTSIDE THE PEDESTRIAN ACCESSIBLE SPACE, PREFERABLY OUTSIDE THE SIDEWALK AREA AND INSIDE THE RIGHT-OF-WAY.



REFERENCED STANDARD DRAWINGS

- SEE T-44.4 FOR CROSS WALK MARKINGS
- SEE MM-OR SERIES FOR CURB RAMP DETAILS
- SEE MM-SPR-1 FOR PEDESTRIAN RAIL REQUIREMENTS & S-P.L-6 FOR GUARDRAIL PLACEMENT
- SEE MM-SW-2 FOR ALTERNATE DETAILS FOR CONCRETE SIDEWALK (PREHABILITATION)
- SEE RP-D-1 FOR 6" SLURRY CONCRETE CURBS AND CONCRETE CURBS AND GUTTERS
- SEE RP-VC-10 OR 11 FOR VERTICAL CONCRETE CURBS AND CONCRETE CURBS AND GUTTER DETAILS
- SEE MM-FM-1 THRU MM-FM-5 FOR BIKE LANEROUTE PAVEMENT MARKINGS
- SEE RP-D-15 & 16 FOR CONCRETE DRIVEWAYS
- SEE MM-T-2 FOR PEDESTRIAN FACILITY LATERAL OFFSETS/ BUFFER GUIDANCE.
- SEE MM-T-3 FOR SHARED USE TYPICAL SECTIONS

GENERAL NOTES

- ALWAYS PLACE SIDEWALK AS FAR AS AWAY FROM THE TRAVELLED WAY WHEN POSSIBLE. FOR SPECIFICATIONS SEE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION.
- WHERE IT BECOMES NECESSARY TO REMOVE PARTS OF EXISTING CONCRETE SIDEWALKS OR RAMPS, THE RESULTING EDGES SHALL BE CUT TO A NEAT LINE, AND ANY OFFSETS IN SUCH LINES SHALL BE MADE AT RIGHT ANGLES.
- SIDEWALK WIDTHS DO NOT INCLUDE THE SIX INCH CURB WIDTH OF PROPOSED TOP OF CURB.
- MAXIMUM SIDEWALK CROSS SLOPE IS 1.5%. ALL SIDEWALKS SHALL HAVE A BROOM FINISH AND SHALL BE 4" THICK UNLESS THE PLANS CALL FOR 8" THICKNESS. THE CONCRETE SHALL BE CLASS "A" AT 4000 PSI. ALL COST TO BE INCLUDED IN ITEM NO. 701-01-01 CONCRETE SIDEWALK (4") S.F. OR 701-01-02 CONCRETE SIDEWALK (8") S.F.
- EXPANSION JOINTS ARE TO BE PLACED 25 TO 30 FEET APART DEPENDING ON TRANSVERSE JOINT MARKINGS AND NEED TO MATCH CURB EXPANSION JOINT WHERE SIDEWALK IS BUILT DIRECTLY AGAINST CURB, OR AS DIRECTED BY THE ENGINEER WHERE THE PROPOSED SIDEWALK IS IN CONTACT WITH THE STREET RETURNING, OR BUILDING LINES PRODUCED AT STREET INTERSECTIONS, WHERE WALKS LEAD TO HOUSES OR OTHER ENTRANCES AND OTHER LOCATIONS WHERE STRESSES MAY DEVELOP. THE COST OF ALL EXPANSION JOINTS IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PROPOSED SIDEWALK.
- CONCRETE JOINT MATERIAL TO BE FLUSH WITH THE SIDEWALK SURFACE. ONE INCH PREFORMED FILLER IN ACCORDANCE WITH SECTION 701-06 OF THE STANDARD SPECIFICATIONS.
- ONE INCH EXPANSION JOINTS ARE TO BE PLACED WHERE THE PROPOSED SIDEWALK IS IN CONTACT WITH CURBULAR CURBS, BUILDINGS AND/OR RETAINING WALLS.
- HALF INCH EXPANSION JOINTS ARE TO BE USED AT ALL OTHER LOCATIONS.
- LONGITUDINAL JOINT MARKINGS WILL NOT BE REQUIRED ON SIDEWALKS THAT ARE 5 FEET OR LESS IN WIDTH. ONE LONGITUDINAL JOINT MARKING WILL BE REQUIRED ON SIDEWALKS OVER 5 FEET BUT LESS THAN 9 FEET IN WIDTH. TWO LONGITUDINAL JOINT MARKINGS WILL BE REQUIRED ON SIDEWALKS OVER 9 FEET BUT LESS THAN 12 FEET IN WIDTH.
- TRANSVERSE JOINT MARKERS ARE TO BE MADE TO FORM BLOCKS AS NEARLY TO SQUARE AS PRACTICAL.
- WHEN LEAVING A SQUARE OPENING IN THE SIDEWALK, THE LENGTH OF THE SIDE OF THE SQUARE OPENING SHOULD BE EQUAL TO THE DIAMETER OF THE FIXED OBJECT PLUS SIXTEEN INCHES. IT WILL BE BORDERED BY HALF INCH EXPANSION JOINT.
- WHEN NEW SIDEWALK IS PLACED ADJACENT TO EXISTING SIDEWALK THE CONTRACTOR SHALL CORRECT ALL ABRUPT CHANGES AND SLOPES TO PROVIDE A SMOOTH TRANSITION FROM THE LIMIT OF CONSTRUCTION TO EXISTING PEDESTRIAN FACILITY.
- DIVIDE THE SURFACE OF SIDEWALKS INTO BLOCKS USING A GROOVING TOOL. SPACE THE GROOVES APPROXIMATELY 1 FEET APART TO PRODUCE SQUARE BLOCKS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- SHAPE AND COMPACT THE SUBGRADE TO A FIRM, EVEN SURFACE IN REASONABLY CLOSE CONFORMITY WITH THE GRADE AND CROSS-SECTION SHOWN ON THE PLANS. REMOVE ALL SOFT AND WEILING MATERIAL, REPAIR AND FINISH WITH ACCEPTABLE MATERIAL, AND COMPACT IT AS DIRECTED BY THE ENGINEER.

REV. 10-28-19 REVISED GENERAL NOTES (2) AND (3) ADDED WITH DETAIL NOTES FOR TYPICAL SIDEWALK CROSS SECTION WITH GRASS STRIP AND SERVICE APPURTENANCES AND REMOVED GENERAL NOTE (2) AND ADDED GENERAL NOTES (2) AND (3). SIDEWALK CONSTRUCTION DETAIL WALL REMOVED. SECTION C-C NOTE WAS REVISED.
 REV. 01-07-2023 REVISED MAILBOX DETAIL AND NOTE.

(Revised Std. Dwg. RP-8-7)

STATE OF TENNESSEE
 STANDARD DRAWINGS
 DEPARTMENT OF TRANSPORTATION
 DETAILS FOR CONCRETE SIDEWALK
 01-07-2019 MM-SW-1

ITEM NO.	REVISION DESCRIPTION OF CHANGE	APPROVAL DATE

THE RESERVES AT COBALT CIRCLE
 BROWNSVILLE, TN.
 DEVELOPER:
 ENGINEER: RENAISSANCE GROUP, INC.

SHEET 06 OF 06

DIVISION OF ENGINEERING
GRADING AND DRAINAGE DETAILS
 LOCATION: 1616 EAST JEFFERSON STREET
 BROWNSVILLE, TN.

SURVEY: SEAS
 DATE: 10/24
 BOOK: _____

DESIGN: JWW DATE: 01/25 CKD: JWW DATE: 01/25 SCALE: _____

DEPUTY CITY ENGINEER _____ DATE _____ CITY ENGINEER _____ DATE _____