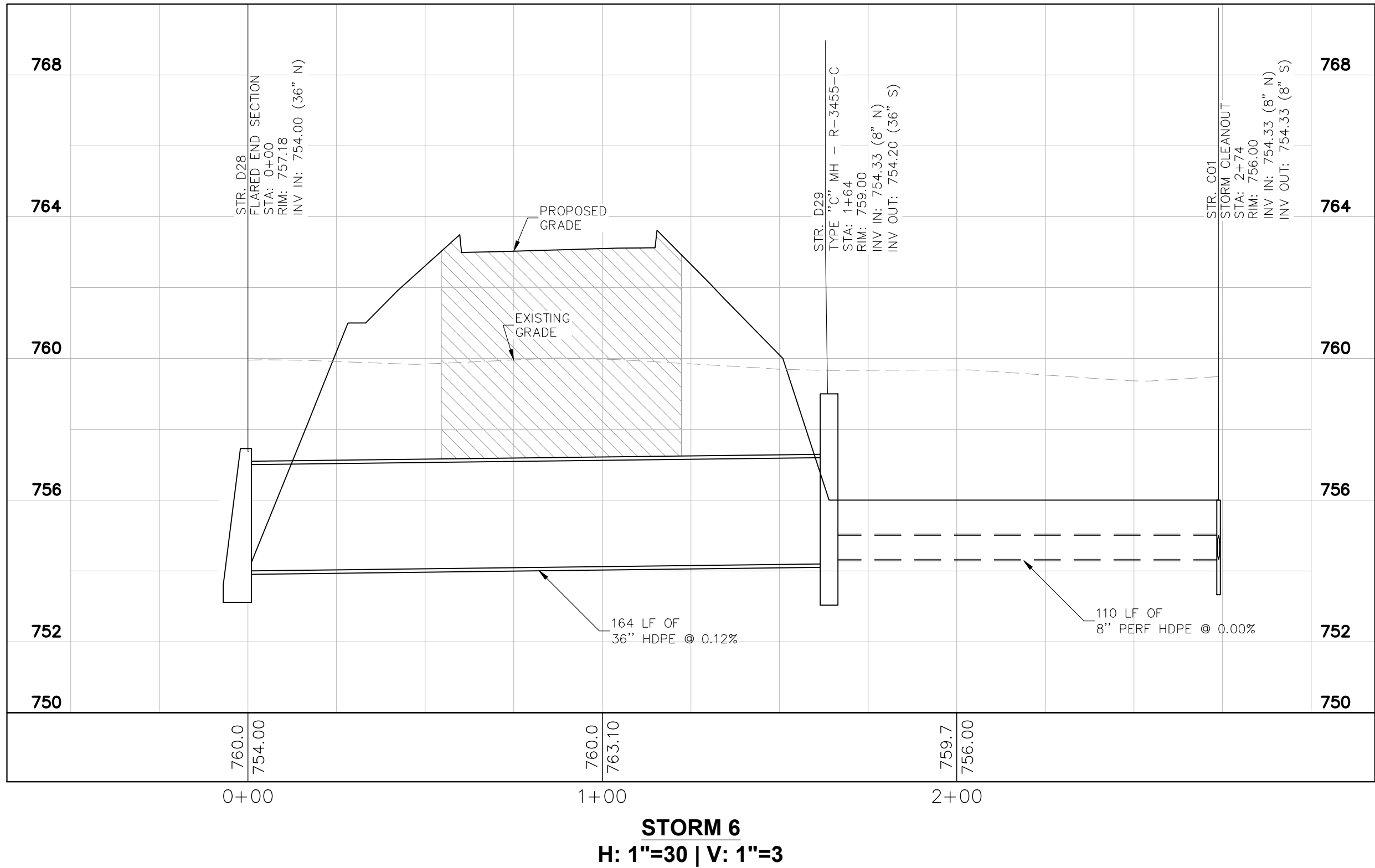
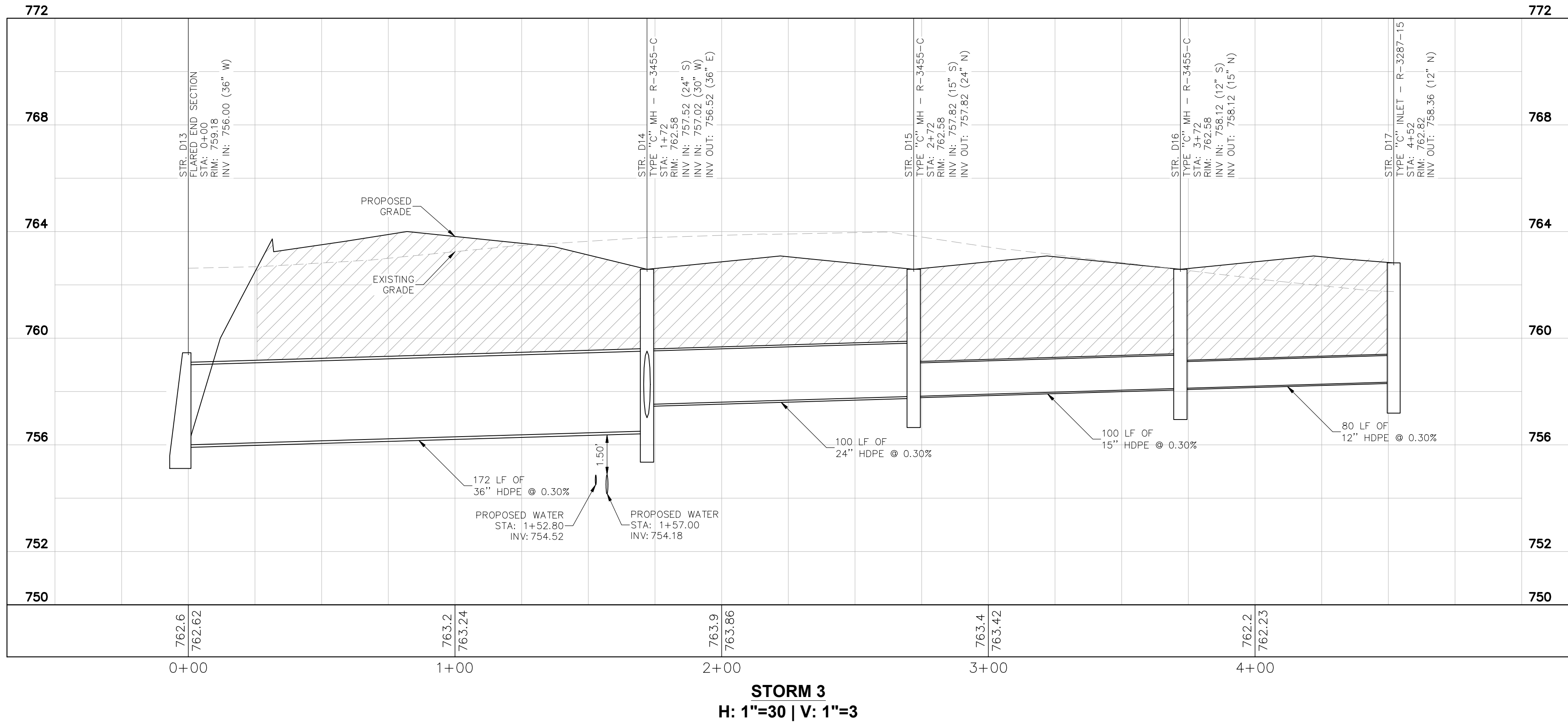
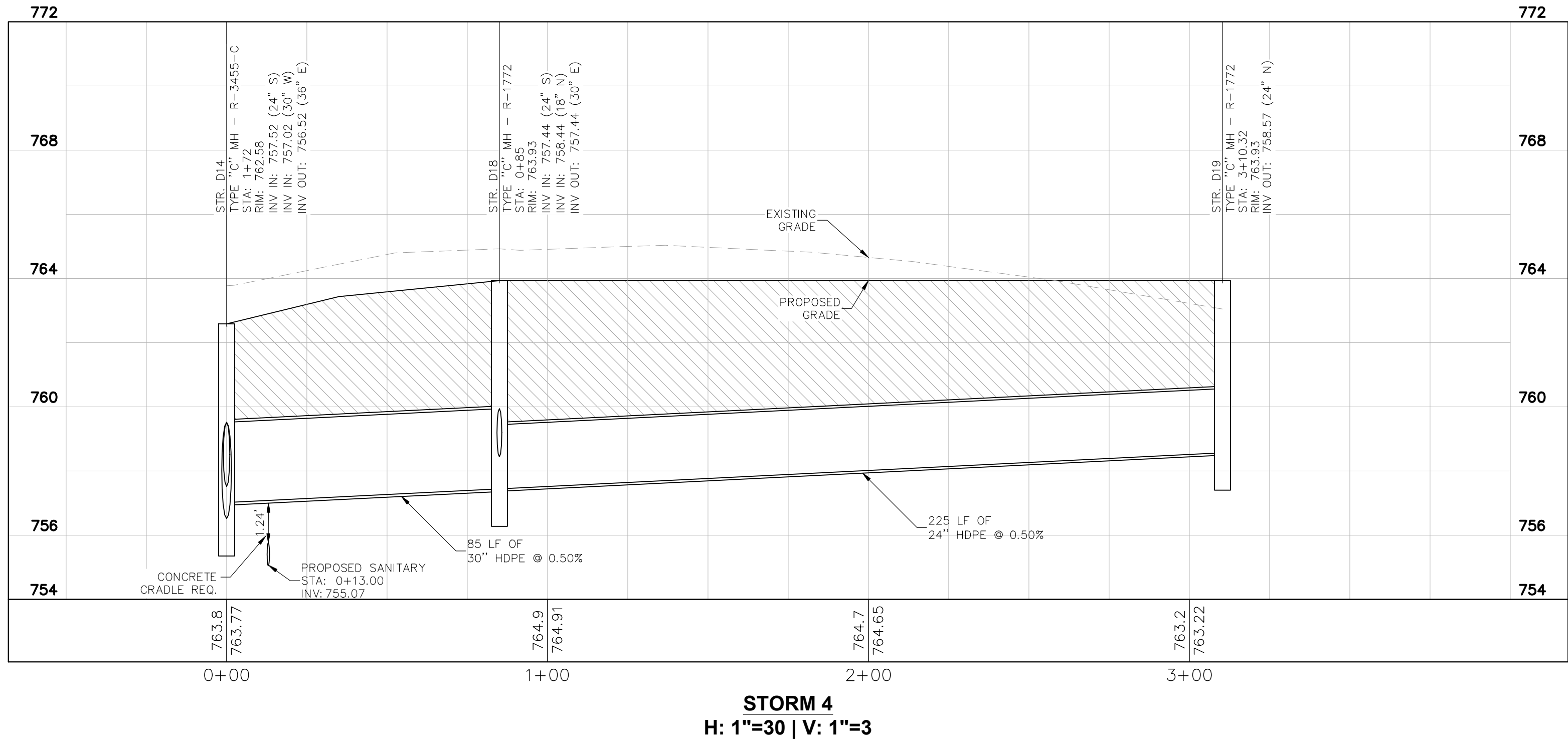




Drawing name: K:\IND_LEV\170350000_cold-summit-franklin\in\2 Design\CADD\plan\sheet\06-X-UTILITY PROFILES.dwg C6.8 Nov 03, 2022 2:36pm by: Kate Polack


This document, together with the concepts and designs presented herein, is an instrument of service, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

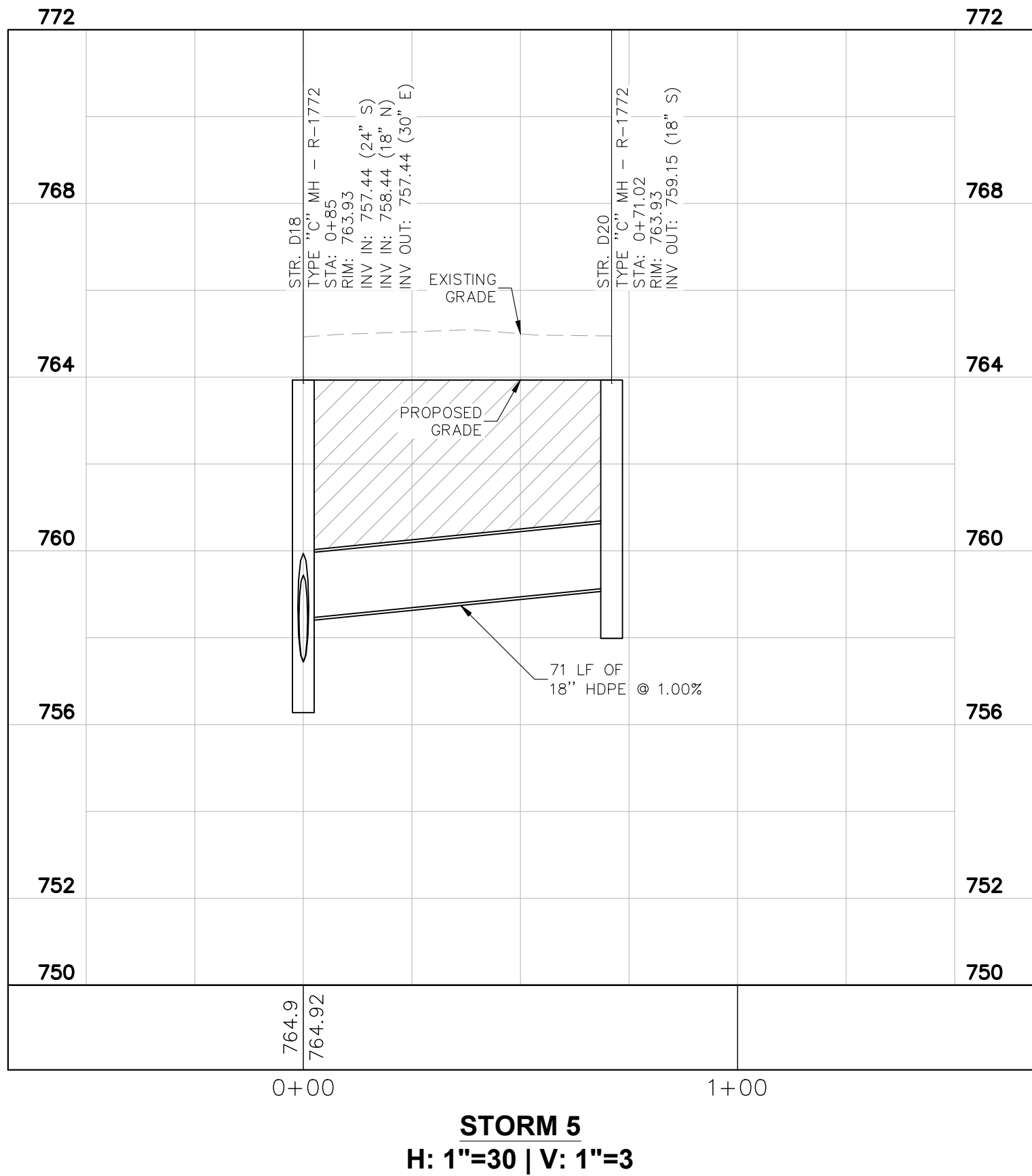


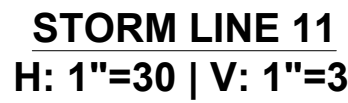
PROFILE LEGEND

 FULL DEPTH GRANULAR BACKFILL REQUIRED (PROFILE VIEW)

 EXISTING PROFILE GRADE

 PROPOSED PROFILE GRADE





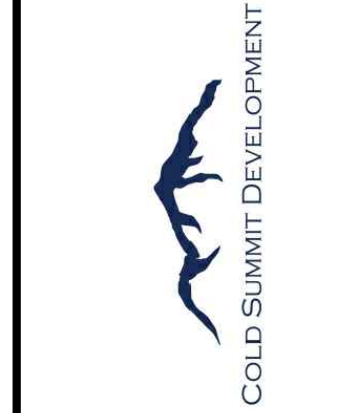
PROFILE LEGEND

**COLD SUMMIT
FRANKLIN, IN**
SEC GRAHAM RD & EARLYWOOD DR

ORIGINAL ISSUE:
11/3/2022
KHA PROJECT NO
170350000
SHEET NUMBER

[illegible]

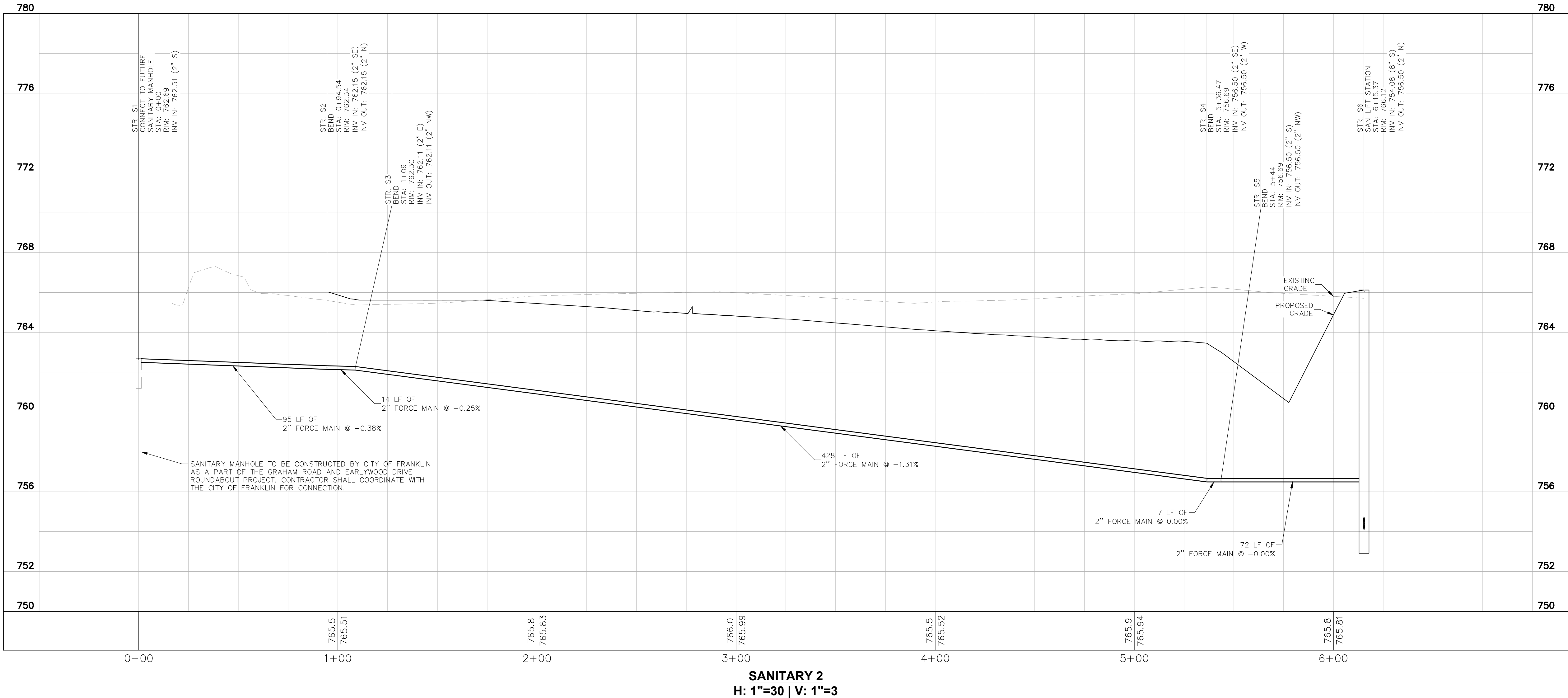
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kinley-Horn and Associates, Inc. shall be without liability to Kinley-Horn and Associates, Inc. The undersigned (undersigned) warrants that the design was prepared for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kinley-Horn and Associates, Inc. shall be without liability to Kinley-Horn and Associates, Inc.



COLD SUMMIT
FRANKLIN, IN
SEC GRAHAM RD & EARLYWOOD DR

ORIGINAL ISSUE:
11/3/2022
HA PROJECT NO.
170350000
SHEET NUMBER
C6.10

Drawing name: K:\IND_LEV\170350000_cold-summit-franklin_in\2_Design\CADD\plan\sheet\06.11-UTILITY PROFILES.dwg C6.11 Nov 03, 2022 2:37pm by: Kate Polack
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



STORM SEWER STRUCTURE DATA TABLE												
NOTE: DEBRIS GUARD REQUIRED ON ALL END SECTIONS												
ALL CASTINGS SHALL BE LABELED "DUMP NO WASTE-DRAINS TO WATERWAY"												
STR. NO:	STRUCTURE/CASTING TYPE NOTE: NEENAH CASTINGS	T.O.R.	INCOMING PIPE DATA (DIRECTION) [FROM STR]		OUTGOING PIPE DATA (DIRECTION) [TO STR]	OUTGOING PIPE L.F.	OUTGOING PIPE SIZE	OUTGOING GRADE (%)	CONNECT TO STRUCTURE	REMARKS	NORTHING	EASTING
S1	CONNECT TO FUTURE SANITARY MANHOLE	762.69	2" FORCE MAIN 762.51 (S) [S2]								198571.23	813298.26
S2	BEND	???	2" FORCE MAIN 762.15 (SE) [S3]		2" FORCE MAIN 762.15 (N) [S1]	95'	2"	-0.38%	S1		198476.71	813300.46
S3	BEND	???	2" FORCE MAIN 762.11 (E) [S4]		2" FORCE MAIN 762.11 (NW) [S2]	14'	2"	-0.25%	S2		198466.94	813310.69
S4	BEND	???	2" FORCE MAIN 756.50 (SE) [S5]		2" FORCE MAIN 756.50 (W) [S3]	428'	2"	-1.31%	S3		198476.89	813738.36
S5	BEND	???	2" FORCE MAIN 756.50 (S) [S6]		2" FORCE MAIN 756.50 (NW) [S4]	7'	2"	0.00%	S4		198472.01	813743.47
S6	SAN LIFT STATION	766.12	8" PVC 754.08 (S) [S7]		2" FORCE MAIN 756.50 (N) [S5]	72'	2"	-0.00%	S5		198400.18	813743.45
S7	48" SAN MH	767.44	8" PVC 754.38 (S) [S8]		8" PVC 754.28 (N) [S6]	49'	8"	0.40%	S6		198353.62	813728.39
S8	45" WYE	767.48	8" PVC 754.51 (S) [S9] 6" PVC 754.51 (W) [S8A]		8" PVC 754.51 (N) [S7]	34'	8"	0.40%	S7		198319.79	813728.34
S8A	6" SAN CO	768.27			6" PVC 760.00 (E) [S8]	20'	6"	27.44%	S8		198319.81	813708.34
S9	48" SAN MH	763.06	8" PVC 755.98 (S) [S10]		8" PVC 755.98 (N) [S8]	366'	8"	0.40%	S8		197953.62	813727.85
S10	45" WYE	763.64	8" PVC 756.23 (S) [S11] 6" PVC 756.23 (W) [S10A]		8" PVC 756.23 (N) [S9]	63'	8"	0.40%	S9		197890.92	813727.77
S10A	6" SAN CO	763.92			6" PVC 760.00 (E) [S10]	20'	6"	18.85%	S10		197890.95	813707.75
S11	45" WYE	763.67	8" PVC 756.39 (S) [S12] 6" PVC 756.39 (W) [S11A]		8" PVC 756.39 (N) [S10]	42'	8"	0.40%	S10		197849.32	813727.71
S11A	6" SAN CO	764.20			6" PVC 760.00 (E) [S11]	19'	6"	18.97%	S11		197849.34	813708.70
S12	48" SAN MH	762.95	8" PVC 757.68 (S) [S13]		8" PVC 757.58 (N) [S11]	296'	8"	0.40%	S11		197553.62	813727.31
S13	45" WYE	767.60	8" PVC 759.24 (S) [S14] 6" PVC 759.24 (W) [S13A]		8" PVC 759.24 (N) [S12]	390'	8"	0.40%	S12		197163.62	813726.79
S13A	6" SAN CO	768.25			6" PVC 760.00 (E) [S13]	19'	6"	4.02%	S13		197163.65	813707.79
S14	48" SAN MH	767.69			8" PVC 759.28 (N) [S13]	10'	8"	0.40%	S13		197153.62	813726.78

Kimley»Horn

©2022 KIMLEY-HORN AND ASSOCIATES, INC.
INDIANAPOLIS, IN 46240
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED

DESIGNED BY: CDC

DRAWN BY: KGP

CHECKED BY: BAS

BRYAN ALLEN S.
REGISTERED PROFESSIONAL ENGINEER
STATE OF INDIANA
NOT APPROVED FOR CONSTRUCTION

Bryan Allen



UTILITY PROFILES

COLD SUMMIT
FRANKLIN, IN
SEC GRAHAM RD & EARLYWOOD DR

Drawing name: K:\IND_LEV\170350000_cold-summit-franklin_in\2_Design\CADD\plan\sheet\06.12-UTILITY PROFILES.dwg 06.12 Nov. 03, 2022 2:37pm by: KatePopok
This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.


STORM SEWER STRUCTURE DATA TABLE NOTE: DEBRIS GUARD REQUIRED ON ALL END SECTIONS ALL CASTINGS SHALL BE LABELED "DUMP NO WASTE-DRAINS TO WATERWAY"												
STR. NO.	STRUCTURE/CASTING TYPE NOTE: NEENAH CASTINGS	T.O.R.	INCOMING PIPE DATA (DIRECTION) [FROM STR]	OUTGOING PIPE DATA (DIRECTION) [TO STR]	OUTGOING PIPE L.F.	OUTGOING PIPE SIZE	OUTGOING GRADE (%)	CONNECT TO STRUCTURE	REMARKS	NORTHING	EASTING	
C01	STORM CLEANOUT	756.00	8" PERF HDPE 754.33 (N) [C02]	8" PERF HDPE 754.33 (S) [D29]	110'	8"	0.00%	D29		197359.82	813939.18	
C02	STORM CLEANOUT	756.00	8" PERF HDPE 754.33 (N) [C03]	8" PERF HDPE 754.33 (S) [C01]	100'	8"	0.00%	C01		197459.82	813939.31	
C03	STORM CLEANOUT	756.00	8" PERF HDPE 754.33 (N) [C04]	8" PERF HDPE 754.33 (S) [C02]	100'	8"	0.00%	C02		197559.82	813939.44	
C04	STORM CLEANOUT	756.00	8" PERF HDPE 754.33 (N) [C05]	8" PERF HDPE 754.33 (S) [C03]	100'	8"	0.00%	C03		197659.82	813939.58	
C05	STORM CLEANOUT	756.00	8" PERF HDPE 754.33 (N) [C06]	8" PERF HDPE 754.33 (S) [C04]	100'	8"	0.00%	C04		197759.82	813939.71	
C06	STORM CLEANOUT	756.00	8" HDPE 754.33 (N) [C08]	8" PERF HDPE 754.33 (S) [C05]	100'	8"	0.00%	C05		197859.82	813939.85	
C08	STORM CLEANOUT	756.00	8" PERF HDPE 754.33 (N) [C09]	8" HDPE 754.33 (S) [C06]	107'	8"	0.00%	C06		197966.82	813939.99	
C09	STORM CLEANOUT	756.00	8" PERF HDPE 754.33 (N) [C010]	8" PERF HDPE 754.33 (S) [C08]	61'	8"	0.00%	C08		198028.20	813940.07	
C010	STORM CLEANOUT	756.00	8" PERF HDPE 754.33 (N) [C011]	8" PERF HDPE 754.33 (S) [C09]	100'	8"	0.00%	C09		198128.20	813940.21	
C011	STORM CLEANOUT	756.00	8" PERF HDPE 754.33 (N) [C012]	8" PERF HDPE 754.33 (S) [C010]	85'	8"	0.00%	C010		198213.17	813940.32	
C012	STORM CLEANOUT	756.00	8" PERF HDPE 754.33 (NW) [C013]	8" PERF HDPE 754.33 (S) [C011]	107'	8"	0.00%	C011		198312.93	813902.67	
C013	STORM CLEANOUT	756.00	8" PERF HDPE 754.33 (NW) [C014]	8" PERF HDPE 754.33 (SE) [C012]	72'	8"	0.00%	C012		198362.19	813850.07	
C014	STORM CLEANOUT	756.00		8" PERF HDPE 754.33 (SE) [C013]	72'	8"	0.00%	C013		198411.45	813797.47	
C015	STORM CLEANOUT	761.17	8" PERF HDPE 759.45 (N) [C016]	8" PERF HDPE 759.45 (S) [D27]	82'	8"	0.29%	D27		197055.54	813293.64	
C016	STORM CLEANOUT	761.40	8" PERF HDPE 759.68 (N) [C017]	8" PERF HDPE 759.68 (S) [C015]	100'	8"	0.23%	C015		197155.54	813293.78	
C017	STORM CLEANOUT	761.64	8" PERF HDPE 759.92 (N) [C018]	8" PERF HDPE 759.92 (S) [C016]	100'	8"	0.23%	C016		197255.54	813293.91	
C018	STORM CLEANOUT	761.87	8" PERF HDPE 760.15 (N) [C019]	8" PERF HDPE 760.15 (S) [C017]	100'	8"	0.23%	C017		197355.53	813294.05	
C019	STORM CLEANOUT	762.11	8" PERF HDPE 760.39 (N) [C020]	8" PERF HDPE 760.39 (S) [C018]	100'	8"	0.23%	C018		197455.53	813294.18	
C020	STORM CLEANOUT	762.34	8" PERF HDPE 760.62 (N) [C021]	8" PERF HDPE 760.62 (S) [C019]	100'	8"	0.23%	C019		197555.53	813294.32	
C021	STORM CLEANOUT	762.58	8" PERF HDPE 760.86 (N) [C022]	8" PERF HDPE 760.86 (S) [C020]	100'	8"	0.23%	C020		197655.53	813294.45	
C022	STORM CLEANOUT	762.81	8" PERF HDPE 761.09 (N) [C023]	8" PERF HDPE 761.09 (S) [C021]	100'	8"	0.23%	C021		197755.53	813294.59	
C023	STORM CLEANOUT	763.05	8" PERF HDPE 761.33 (N) [C024]	8" PERF HDPE 761.33 (S) [C022]	100'	8"	0.23%	C022		197855.53	813294.72	
C024	STORM CLEANOUT	763.28	8" PERF HDPE 761.56 (N) [C025]	8" PERF HDPE 761.56 (S) [C023]	100'	8"	0.23%	C023		197955.53	813294.85	
C025	STORM CLEANOUT	763.52	8" PERF HDPE 761.80 (N) [C026]	8" PERF HDPE 761.80 (S) [C024]	100'	8"	0.23%	C024		198055.53	813294.99	
C026	STORM CLEANOUT	763.75	8" PERF HDPE 762.03 (N) [C027]	8" PERF HDPE 762.03 (S) [C025]	100'	8"	0.23%	C025		198155.53	813295.12	
C027	STORM CLEANOUT	763.99	8" PERF HDPE 762.27 (N) [C028]	8" PERF HDPE 762.27 (S) [C026]	100'	8"	0.23%	C026		198255.53	813295.26	
C028	STORM CLEANOUT	764.22		8" PERF HDPE 762.50 (S) [C027]	100'	8"	0.23%	C027		198355.53	813295.39	
D1	FLARED END SECTION		36" HDPE 754.00 (NW) [D2]							197088.75	813837.60	
D2	TYPE "C" MH - R-3455-C	762.58	24" HDPE 755.40 (N) [D3] 30" HDPE 754.90 (W) [D9]	36" HDPE 754.90 (SE) [D1]	200'	36"	0.45%	D1		197263.64	813739.92	
D3	TYPE "C" MH - R-3455-C	762.58	24" HDPE 755.90 (N) [D4]	24" HDPE 755.90 (S) [D2]	100'	24"	0.50%	D2		197363.64	813740.06	
D4	TYPE "C" MH - R-3455-C	762.58	24" HDPE 756.40 (N) [D5]	24" HDPE 756.40 (S) [D3]	100'	24"	0.50%	D3		197463.64	813740.19	
D5	TYPE "C" MH - R-3455-C	762.58	18" HDPE 756.90 (N) [D6]	24" HDPE 756.90 (S) [D4]	100'	24"	0.50%	D4		197563.64	813740.33	
D6	TYPE "C" MH - R-3455-C	762.58	15" HDPE 757.40 (N) [D7]	18" HDPE 757.40 (S) [D5]	100'	18"	0.50%	D5		197663.64	813740.46	
D7	TYPE "C" MH - R-3455-C	762.58	12" HDPE 757.90 (N) [D8]	15" HDPE 757.90 (S) [D6]	100'	15"	0.50%	D6		197763.64	813740.60	
D8	TYPE "C" INLET - R-3287-15	762.82		12" HDPE 758.28 (S) [D7]	76'	12"	0.50%	D7		197840.08	813740.70	
D9	TYPE "C" MH - R-1772	763.93	30" HDPE 755.33 (N) [D10]	30" HDPE 755.33 (E) [D2]	85'	30"	0.50%	D2		197263.75	813654.92	
D10	TYPE "C" MH - R-1772	763.93	24" HDPE 756.20 (N) [D11]	30" HDPE 756.20 (S) [D9]	175'	30"	0.50%	D9		197438.75	813655.16	
D11	TYPE "C" MH - R-1772	763.93	24" HDPE 757.08 (N) [D12]	24" HDPE 757.08 (S) [D10]	175'	24"	0.50%	D10		197613.75	813655.39	
D12	TYPE "C" MH - R-1772	763.93		24" HDPE 757.96 (S) [D11]	176'	24"	0.50%	D11		197790.23	813655.63	
D13	FLARED END SECTION		36" HDPE 756.00 (W) [D14]							198179.85	813913.16	
D14	TYPE "C" MH - R-3455-C	762.58	24" HDPE 757.52 (S) [D15] 30" HDPE 757.02 (W) [D18]	36" HDPE 756.52 (E) [D13]	172'	36"	0.30%	D13		198180.08	813741.16	
D15	TYPE "C" MH - R-3455-C	762.58	15" HDPE 757.82 (S) [D16]	24" HDPE 757.82 (N) [D14]	100'	24"	0.30%	D14		198080.08	813741.02	
D16	TYPE "C" MH - R-3455-C	762.58	12" HDPE 758.12 (S) [D17]	15" HDPE 758.12 (N) [D15]	100'	15"	0.30%	D15		197980.08	813740.89	
D17	TYPE "C" INLET - R-3287-15	762.82		12" HDPE 758.36 (N) [D16]	80'	12"	0.30%	D16		197900.08	813740.78	
D18	TYPE "C" MH - R-1772	763.93	24" HDPE 757.44 (S) [D19] 18" HDPE 758.44 (N) [D20]	30" HDPE 757.44 (E) [D14]	85'	30"	0.50%	D14		198180.20	813656.16	
D19	TYPE "C" MH - R-1772	763.93		24" HDPE 758.57 (N) [D18]	225'	24"	0.50%	D18		197954.88	813655.85	
D20	TYPE "C" MH - R-1772	763.93		18" HDPE 759.15 (S) [D18]	71'	18"	1.00%	D18		198251.22	813656.25	
D21	FLARED END SECTION		36" HDPE 756.00 (N) [D22]							197869.81	813944.61	
D22	FLARED END SECTION			36" HDPE 756.00 (S) [D21]	92'	36"	-0.00%	D21		197961.81	813944.73	
D23	FLARED END SECTION		36" HDPE 756.00 (N) [D24]							197869.82	813935.11	
D24	FLARED END SECTION			36" HDPE 756.00 (S) [D23]	92'	36"	0.00%	D23		197961.82	813935.23	
D25	TYPE "C" MH - R-3455-C	759.00		36" HDPE 754.00 (S) [D26]	53'	36"	0.17%	D26		196867.87	813884.19	
D26	FLARED END SECTION		36" HDPE 753.91 (N) [D25]							196814.73	813885.02	
D27	MITERED END SECTION		8" PERF HDPE 759.21 (N) [C015]							196973.24	813293.57	
D28	FLARED END SECTION		36" HDPE 754.00 (N) [D29]							197092.23	813894.10	
D29	TYPE "C" MH - R-3455-C	759.00	8" PERF HDPE 754.33 (N) [C01]	36" HDPE 754.20 (S) [D28]	164'	36"	0.12%	D28		197249.92	813939.03	

AS NOTED
DESIGNED BY CDC
DRAWN BY: KGP
CHECKED BY: BAS

BRYAN ALLEN S.
REGISTERED
ENGINEER
NO. 12345
STATE OF INDIANA

NOT APPROVED FOR
CONSTRUCTION

Bryan Starnes



COLD SUMMIT DEVELOPMENT

UTILITY PROFILES

COLD SUMMIT
FRANKLIN, IN
SEC GRAHAM RD & EARLYWOOD DR

ORIGINAL ISSUE:
11/3/2022
KHA PROJECT NO.
170350000
SHEET NUMBER
C6.12

Kimley»Horn

©2022 KIMLEY-HORN AND ASSOCIATES, INC.
250 EAST 86TH STREET, SUITE 550,
INDIANAPOLIS, IN 46240
WWW.KIMLEY-HORN.COM

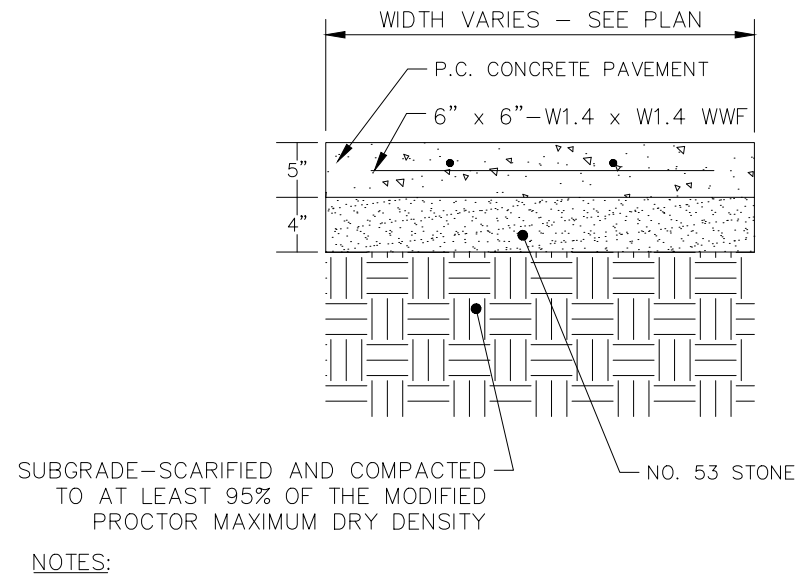
REVISIONS

DATE

BY

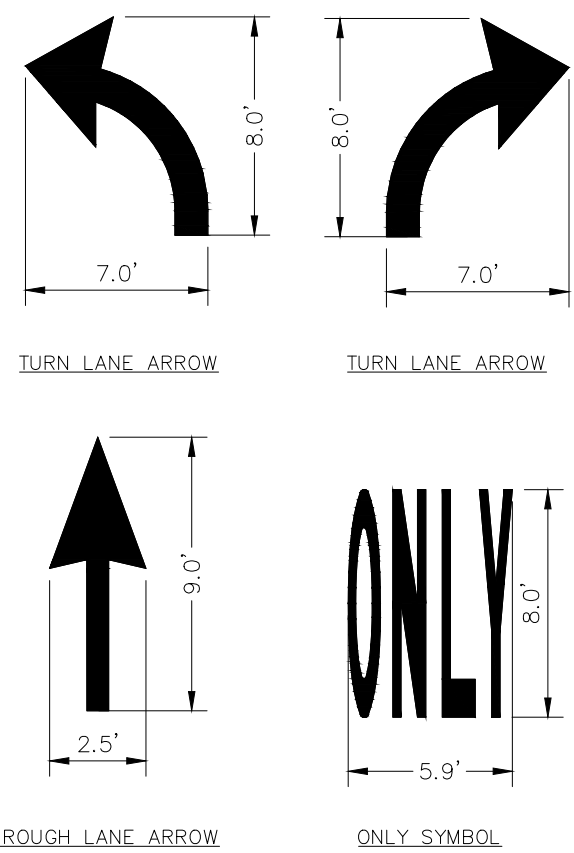
No.

Drawing name: K:\IND_LEVE\170350000-cold-summit-franklin_in\2-Design\CADD\plan sheets\active\C70-CONSTRUCTION DETAILS.dwg C70 Nov 03, 2022 2:37pm by Kate Polack
This document, together with the concept and designs presented herein, is an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kinley-Horn and Associates, Inc. shall be without liability to Kinley-Horn and Associates, Inc.



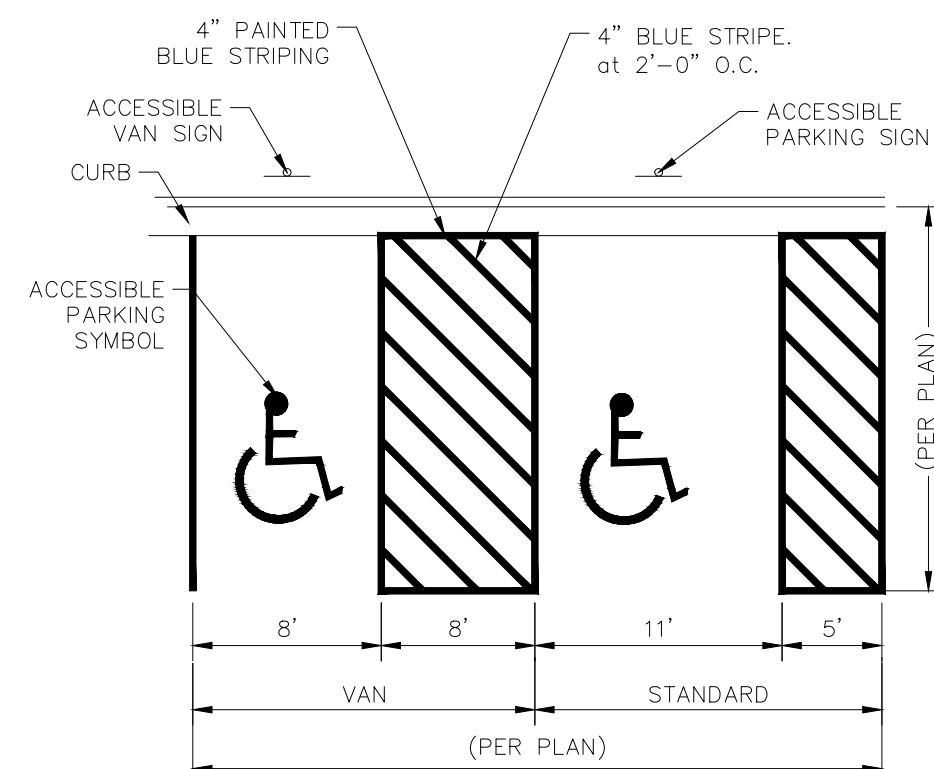
- NOTES:
1. ALL SIDEWALK SHALL BE CONSTRUCTED WITH CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,500 PSI AT 14 DAYS.
 2. PROVIDE 1/2" EXPANSION JOINTS AT 20', MAXIMUM, SPACING AND FILLED WITH PREMOLDED BITUMINOUS EXPANSION JOINT FILLER MATERIAL OR REDWOOD. EXPANSION JOINTS SHALL HAVE #4 DOWELS, LUBRICATED, 18" LONG, AT 12" CENTERS, 6" FROM EDGE.
 3. PROVIDE 3/8" GROOVED CONTROL JOINTS AT 5' CENTERS.
 4. PROVIDE 1/2" BITUMINOUS EXPANSION JOINT FILLER MATERIAL WHERE WALK ABUTS EXISTING IMPROVEMENTS AND AT ALL CHANGES IN GRADE.
 5. USE 2-#4 REINFORCING BARS, 10' LONG OVER ALL UTILITY TRENCHES FOR NEW SIDEWALK AND CONNECTIONS TO EXISTING SIDEWALK.
 6. AT DRIVE APPROACHES, SIDEWALK PCC AND BASE THICKNESS SHALL MATCH THAT OF THE DRIVE.

CONCRETE SIDEWALK
N.T.S.



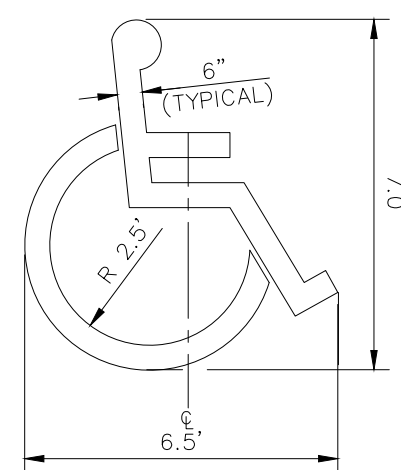
NOTE: ALL TRAFFIC FLOW ARROWS TO BE PAINTED PER STATE DOT STANDARDS PER DIMENSIONS ABOVE.

TRAFFIC FLOW MARKINGS
N.T.S.

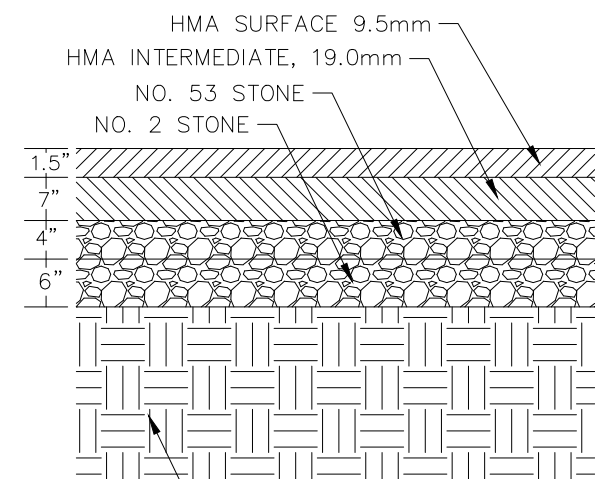


NOTE: REFER TO PLAN FOR DETAILED LAYOUT AND DIMENSIONS

ACCESSIBLE PAVEMENT MARKINGS
N.T.S.

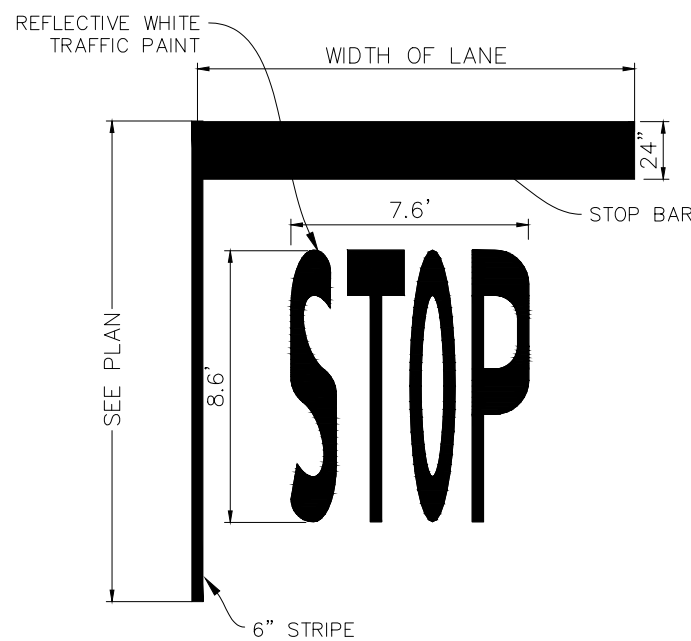


ACCESSIBLE PARKING SYMBOL
N.T.S.

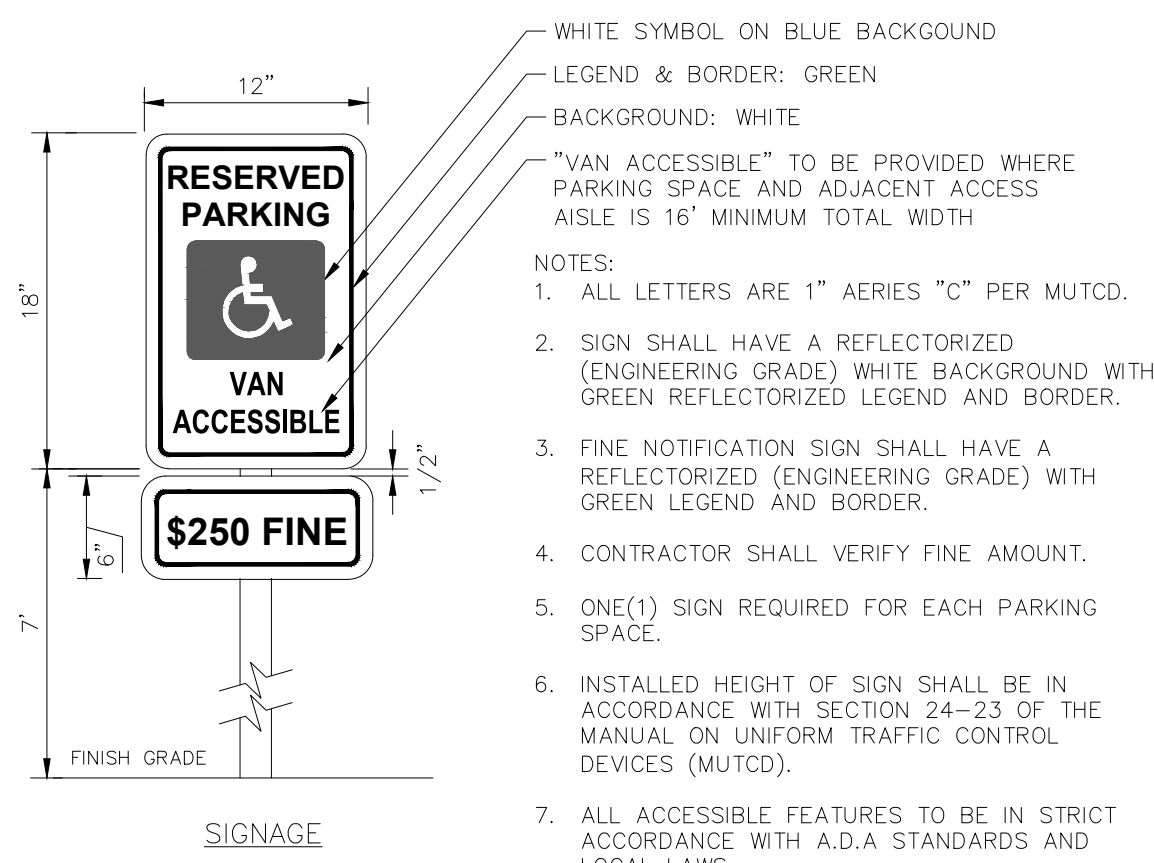


- NOTE:
1. CURRENT INDOT SPECIFICATIONS, CONTRACTOR TO ENSURE COMPLIANCE WITH GEOTECHNICAL ENGINEERING RECOMMENDATIONS

HEAVY DUTY ASPHALT PAVEMENT SECTION
N.T.S.

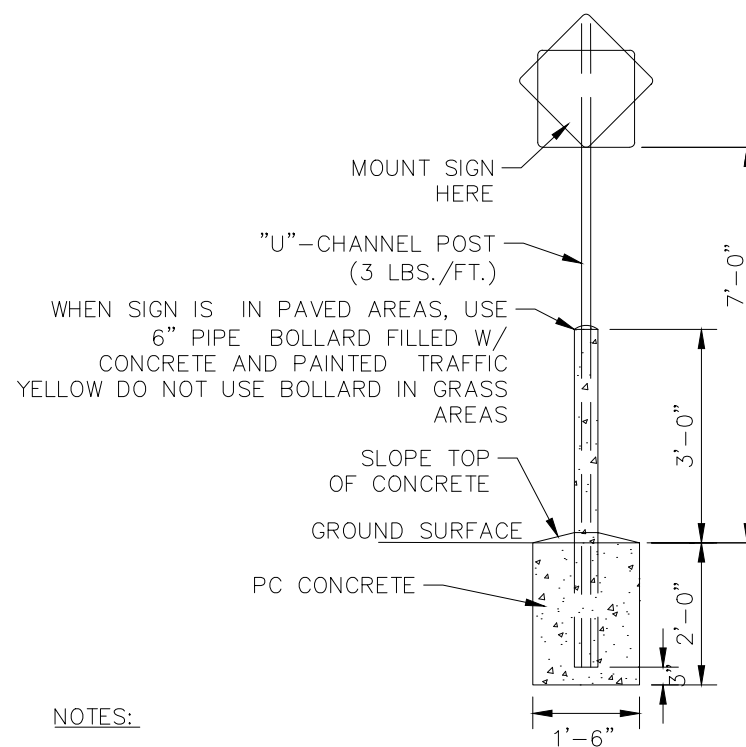


24" WIDE STOP BAR
N.T.S.



SIGNAGE

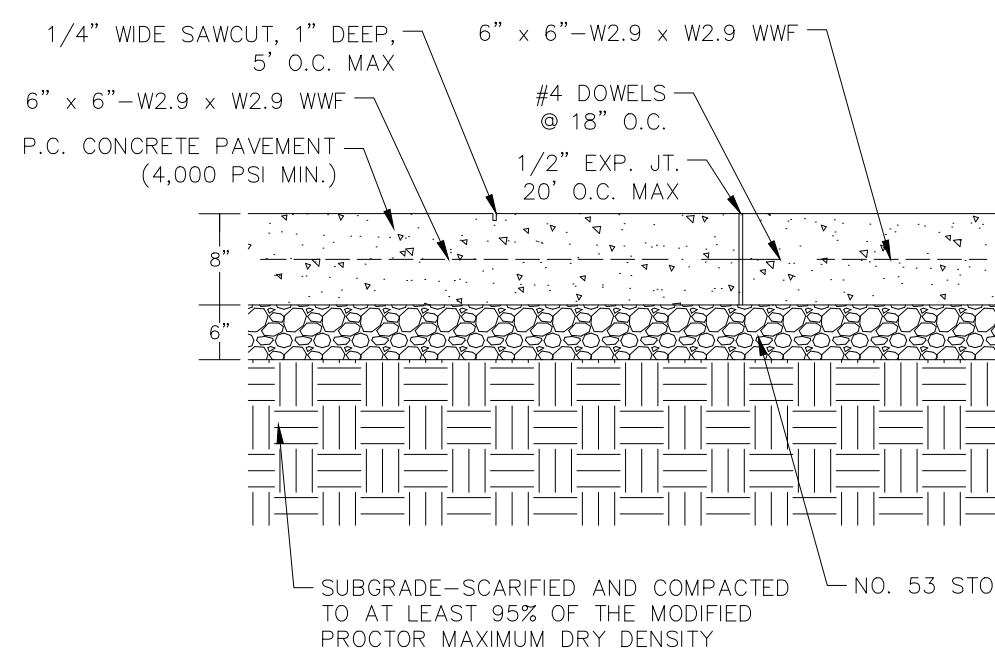
ACCESSIBLE PARKING SIGNAGE
N.T.S.



NOTES:

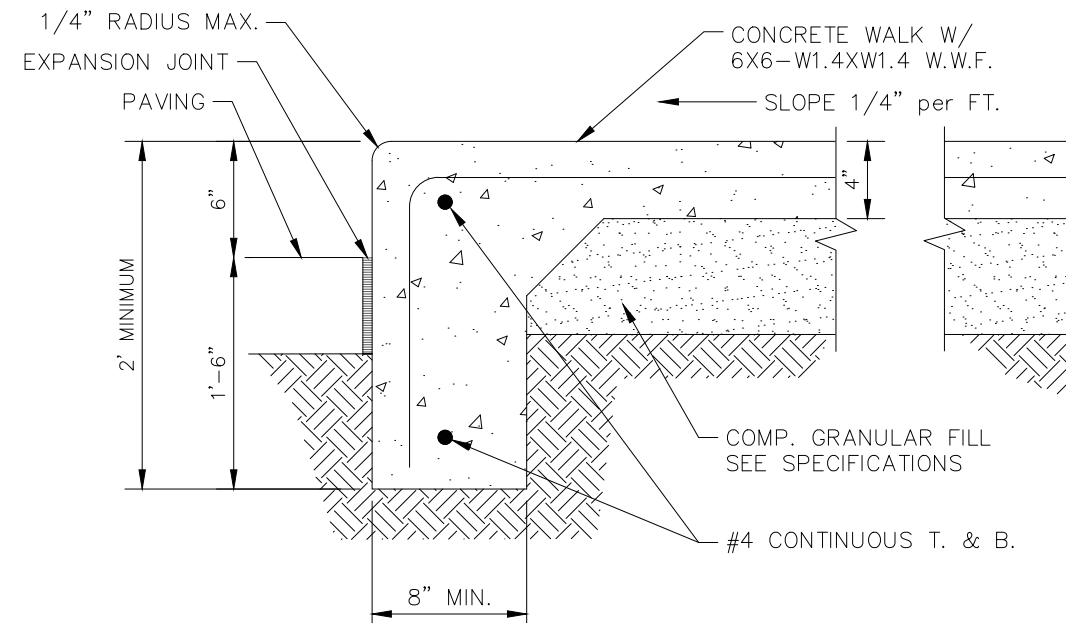
- POLE AND SIGN TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
- ALL SIGNS SHALL COMPLY WITH U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION'S "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", LOCAL CODES AND AS SPECIFIED. MOUNT SIGNS TO POST IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

STANDARD SIGN BASE
N.T.S.

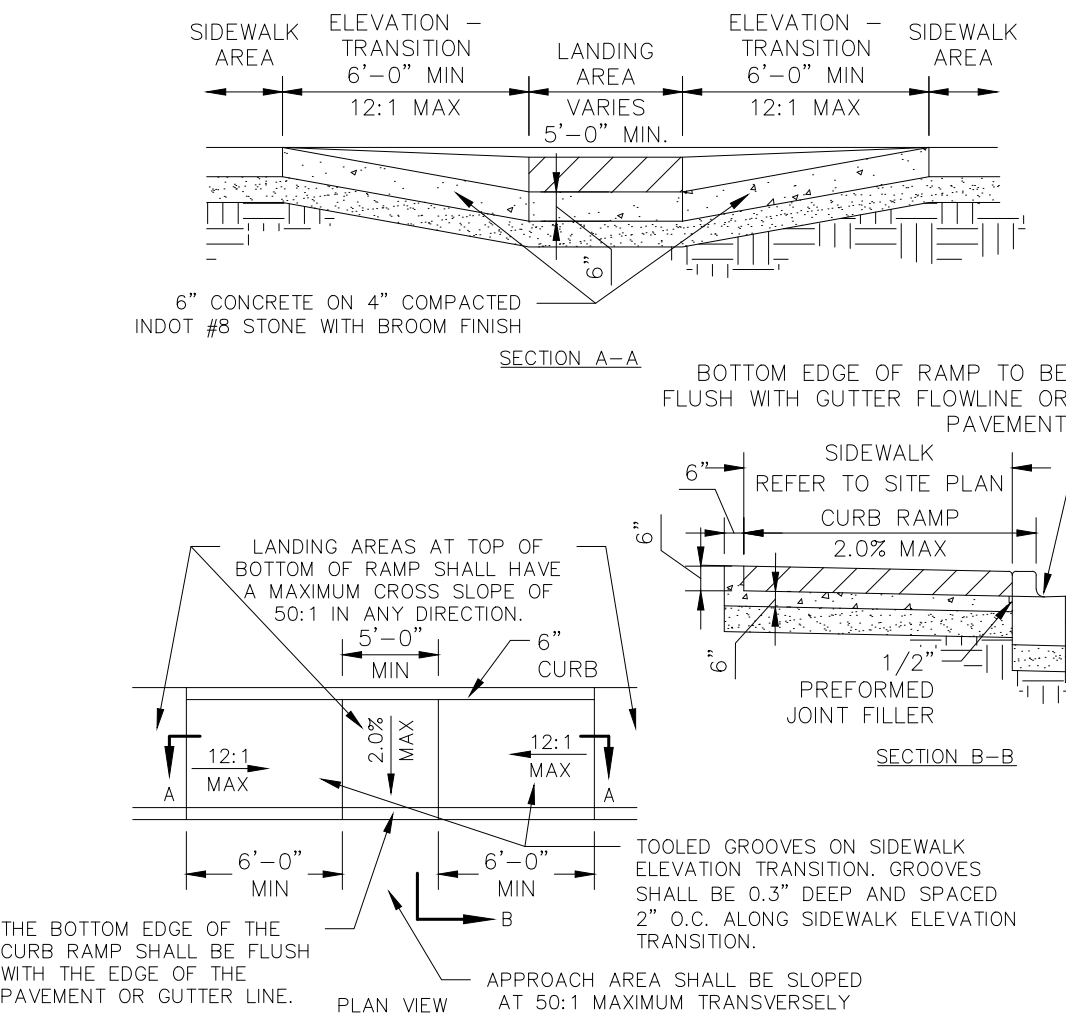


- NOTE:
1. CURRENT INDOT SPECIFICATIONS, CONTRACTOR TO ENSURE COMPLIANCE WITH GEOTECHNICAL ENGINEERING RECOMMENDATIONS

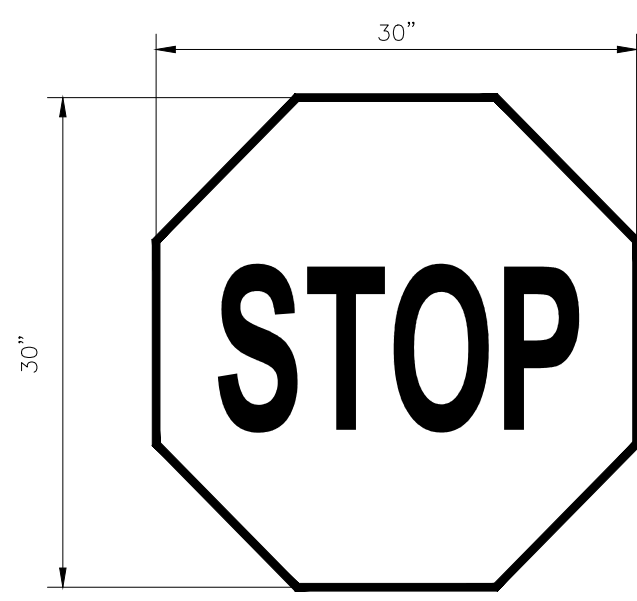
HEAVY DUTY CONCRETE PAVEMENT SECTION
N.T.S.



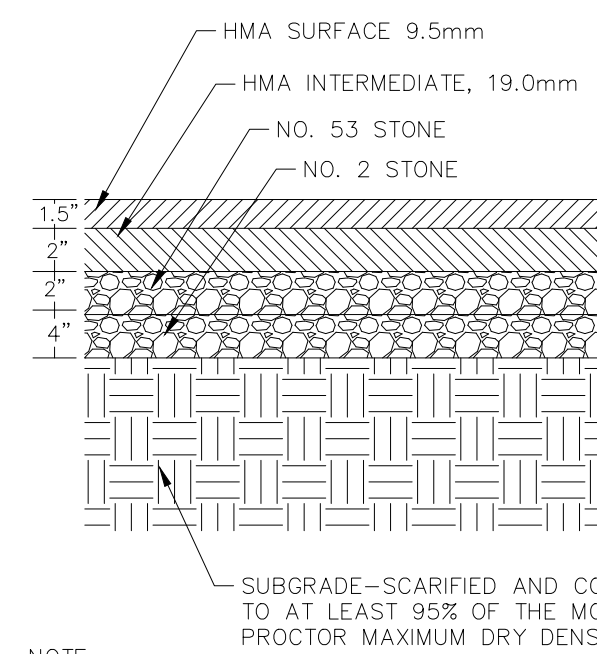
COMBINED CURB AND WALK DETAIL
N.T.S.



ACCESSIBLE RAMP, TYPE 'K'
N.T.S.

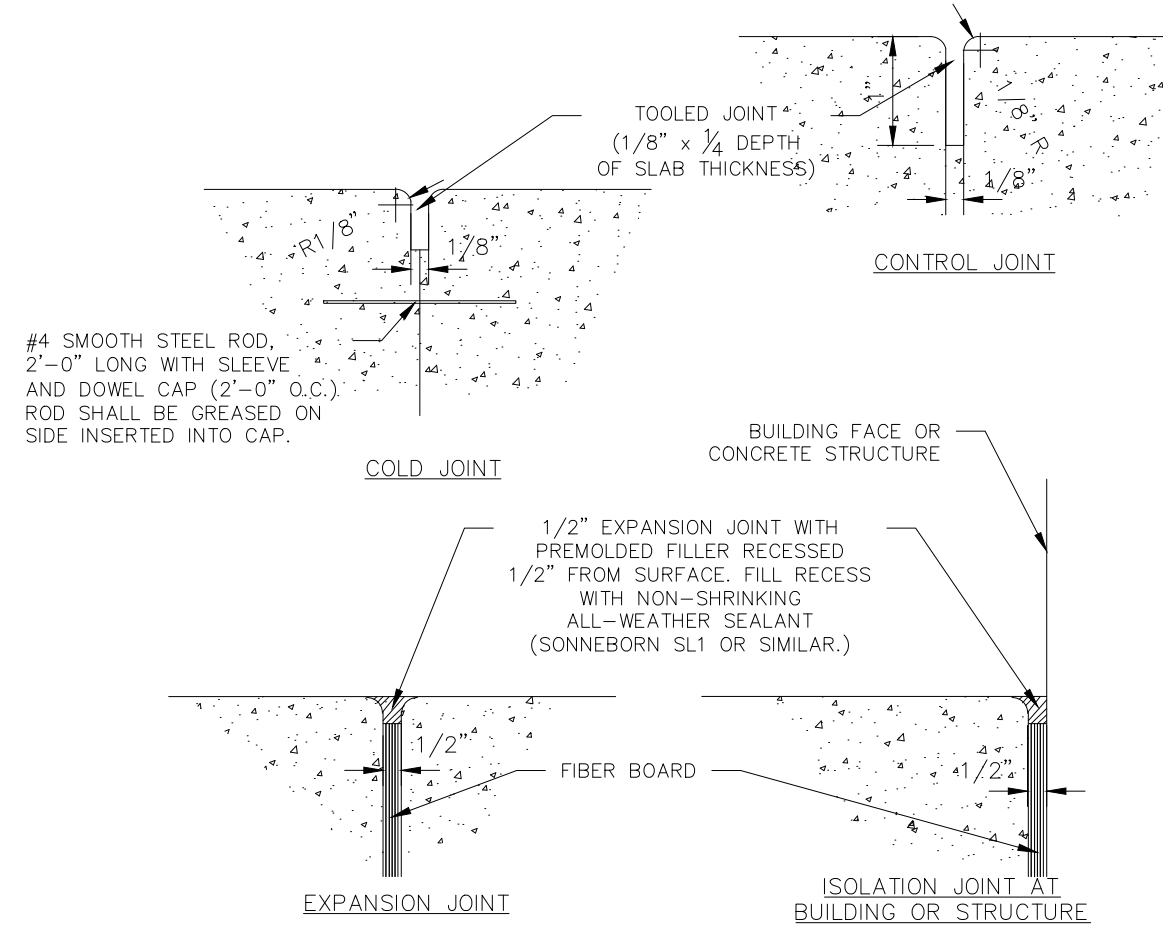


STOP SIGN
N.T.S.



- NOTE:
1. CURRENT INDOT SPECIFICATIONS, CONTRACTOR TO ENSURE COMPLIANCE WITH GEOTECHNICAL ENGINEERING RECOMMENDATIONS

STANDARD DUTY ASPHALT PAVEMENT SECTION
N.T.S.



TYPICAL CONCRETE JOINT DETAILS
N.T.S.



TCP Preliminary Design Information

Key Design Memo

For a fair comparison, the "Heavy Duty" TCPs were designed based on the traffic info. assumed in the geo report. The traffic of "Light Duty" TCP was back-calculated from the current AC design in the geo report, following AASHTO 93 guide.

If the subgrade will not be chemically stabilized, the TCP thicknesses should all increase by 0.25".

Should more accurate traffic and geo info. become available, please notify us to update the TCP designs.

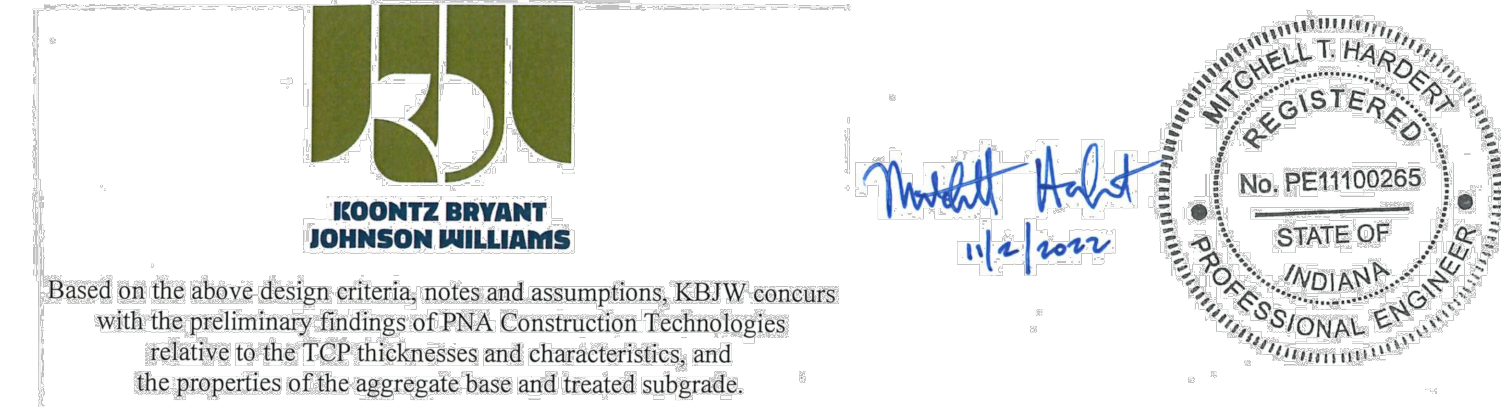
Project Name: Cold Summit Development - Franklin, IN			
	Light Duty	Heavy Duty - Traffic 1	Heavy Duty - Traffic 2
Number of fully loaded 18-wheeler trucks per day	N/A	100	200
Total Traffic (ESALs)	97,000	1,863,500	3,727,000
Design life	15 years	15 years	15 years
% Cracked Slab at end of DL	5.92	8.45	9.26
Concrete Thickness (in)	4.5"	5.5"	5.75"
Joint Spacing (ft)	0ft	0ft	0ft
28-day Compressive Strength (psi)	4000 psi	4000 psi	4000 psi
Reinforcement (type)	Forta Ferro Fiber	Forta Ferro Fiber	Forta Ferro Fiber
Fiber Dosage (lbs/yd3)	4.0	4.0	4.0
Side Type	Supported (curb)	Supported (curb)	Supported (curb)
Granular Aggregate Base (in)	6.0	6.0	6.0
Subgrade Treatment	14" Lime Stabilized **	14" Lime Stabilized **	14" Lime Stabilized **

Notes and Assumptions:

- 28-day compressive strength (C₂₈)=4000 psi was assumed, which translates to 28-day flexural strength [MOR]=570 psi for design. The conversion was based on the correlation between compressive strength and flexural strength for concrete, i.e., MOR=C₂₈^{0.5} (psi).
- An ultimate (365 days) drying shrinkage of 650 millionths was assumed
- Edge support was assumed to be either curb or thickened edge, unless otherwise noted
- For control (saw cut) joints, no dowels are required; must use thin saw blade (1/2" thick) for either early entry or wet saw; no joint sealant is required
- For construction/formed joints, use PNA Diamond Dowels* except for freeze-thaw climate where PNA Square Dowels should be used
- Epoxy coating of dowels can prevent/delay the corrosion of dowels but at an increased cost. The use of epoxy-coated dowels (PNA Brand) should be discussed with PNA on a project-by-project basis
- *TCPs typically designed to receive axle loads of semi-trailer trucks. An exception is for dolly pad slabs that may receive dynamic/impact loads when semi-trailers being unloaded from trailers--when dropping of dolly legs/landing gears on dolly pad slabs is allowed which creates unfavorable dynamic/impact loading that can severely damage the slabs, the slabs were empirically designed with an 8" TCP (w/ 4 lbs/yd³ of Forta Ferro Fiber)
- **This is per the geo report recommended subgrade stabilization method, the actual depth and rate of stabilization need to be adjusted based on field observations and performance by a licensed geotechnical engineer, in order to meet the strength requirement
- Please notify PNA Construction Technologies should any project information change
- Please reference "PNA CONCRETE PAVEMENT SPECIFICATION" document for more information

TCP design exclusively offered in the USA and Canada by PNA Construction Technologies. For more information on TCP, please visit www.pna-inc.com/TCP

PNA Construction Technologies and Diamond Dowel are registered trademarks of Illinois Tool Works, Inc.



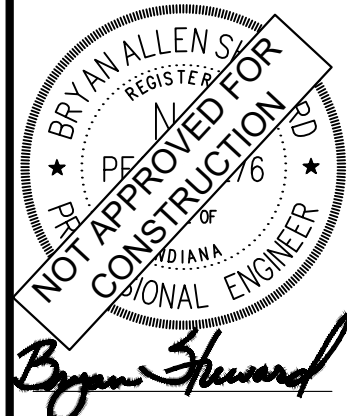
Based on the above design criteria, notes and assumptions, KBJW concurs with the preliminary findings of PNA Construction Technologies relative to the TCP thicknesses and characteristics, and the properties of the aggregate base and treated subgrade.

TCP PAVEMENT
N.T.S.

NO.	REVISIONS	DATE	BY

Kimley»Horn
©2022 KIMLEY-HORN AND ASSOCIATES, INC.
250 EAST 96TH STREET, SUITE 550,
INDIANAPOLIS, IN 46240
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY: CDC
DRAWN BY: KGP
CHECKED BY: BAS



COLD SUMMIT DEVELOPMENT

CONSTRUCTION DETAILS

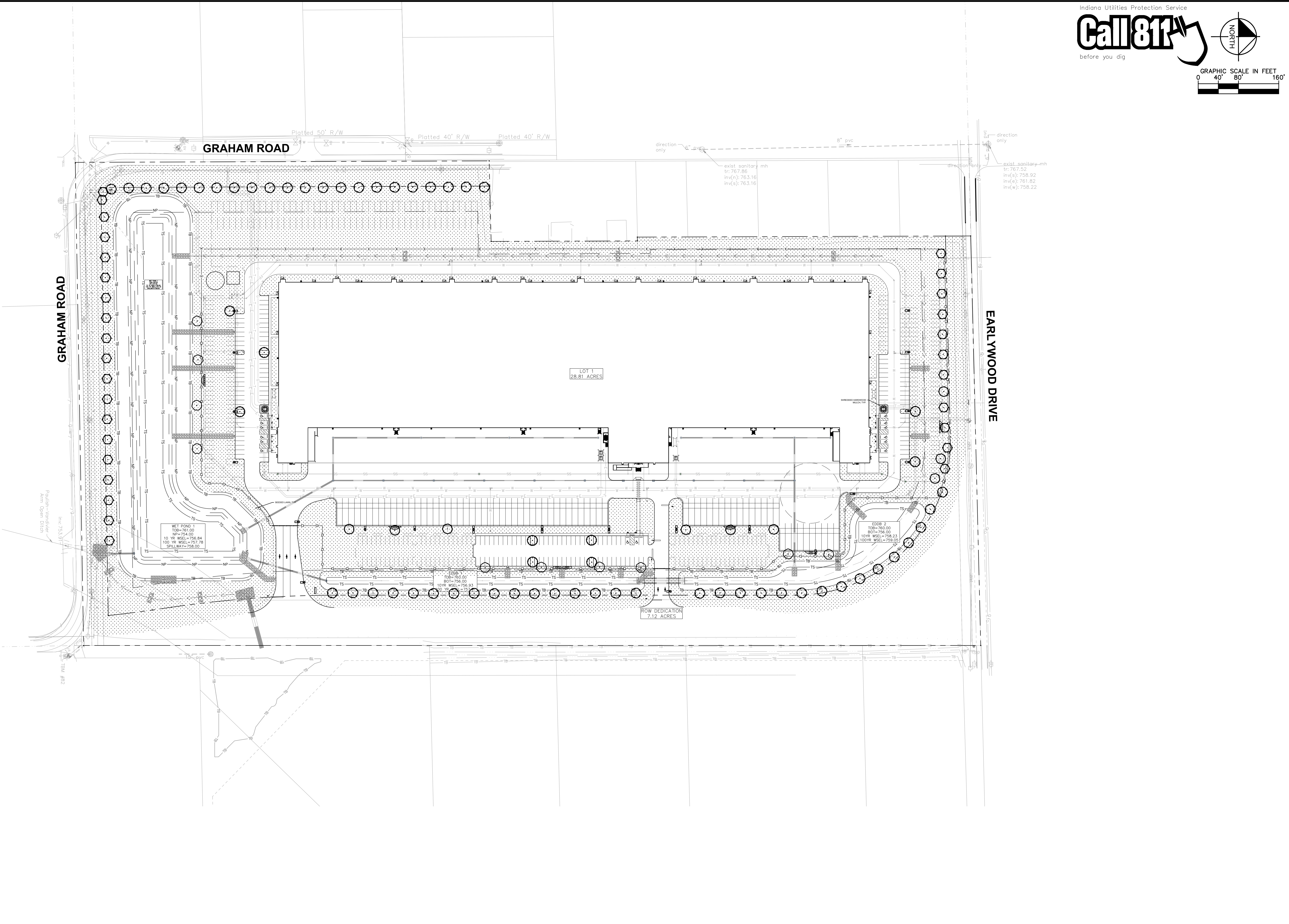
COLD SUMMIT
FRANKLIN, IN
SEC GRAHAM RD & EARLYWOOD DR

ORIGINAL ISSUE:
11/3/2022
KHA PROJECT NO.
170350000

SHEET NUMBER

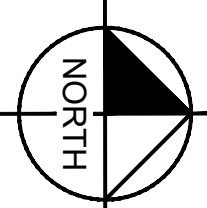
C7.0

Drawing name: K:\IND_LEV\170350000_cold-summit-franklin_in\2_Design\CADD\plan\sheet\1.0-OVERALL LANDSCAPE PLAN.dwg L1.0 Nov 03, 2022 2:39pm by Kate Polack
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.


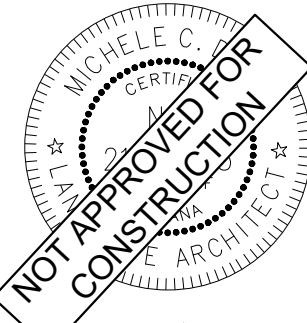


Indiana Utilities Protection Service

Call 811
before you dig


NORTH

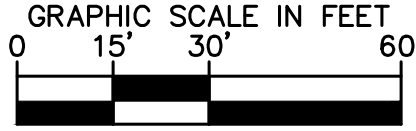
GRAPHIC SCALE IN FEET
0 40' 80' 160'

ORIGINAL ISSUE: 11/3/2022 KHA PROJECT NO. 170350000 SHEET NUMBER L1.0	COLD SUMMIT FRANKLIN, IN SEC GRAHAM RD & EARLYWOOD DR	OVERALL LANDSCAPE PLAN	 COLD SUMMIT DEVELOPMENT	 <i>Michele Kasper</i>	SCALE: AS NOTED DESIGNED BY CDC DRAWN BY: KGP CHECKED BY: BAS	Kimley-Horn ©2022 KIMLEY-HORN AND ASSOCIATES, INC. INDIANAPOLIS, IN 46240 WWW.KIMLEY-HORN.COM	REVISIONS	DATE	BY
					No.				

Drawing name: R:\NOV\DEVN\7035000\1\cdd-summit-tranlink\1\1\Design\Output\Drawings\110-LANDSERVICE PLAN.dwg L11 Nov. 03, 2022 2:40pm By: KatePocock

MATCHLINE - SEE SHEET L1.1

Call 811
before you dig



MATCHLINE - SEE SHEET L1.1

SEC GRAHAM RD & EARLYWOOD DR

LANDSCAPE PLAN



DESIGNED BY: CDC

Kim|ev»Horn

© 2022 KIMLEY-HORN AND ASSOCIATES, INC.
250 EAST 96TH STREET SUITE 580

INDIANAPOLIS, IN 46240
PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

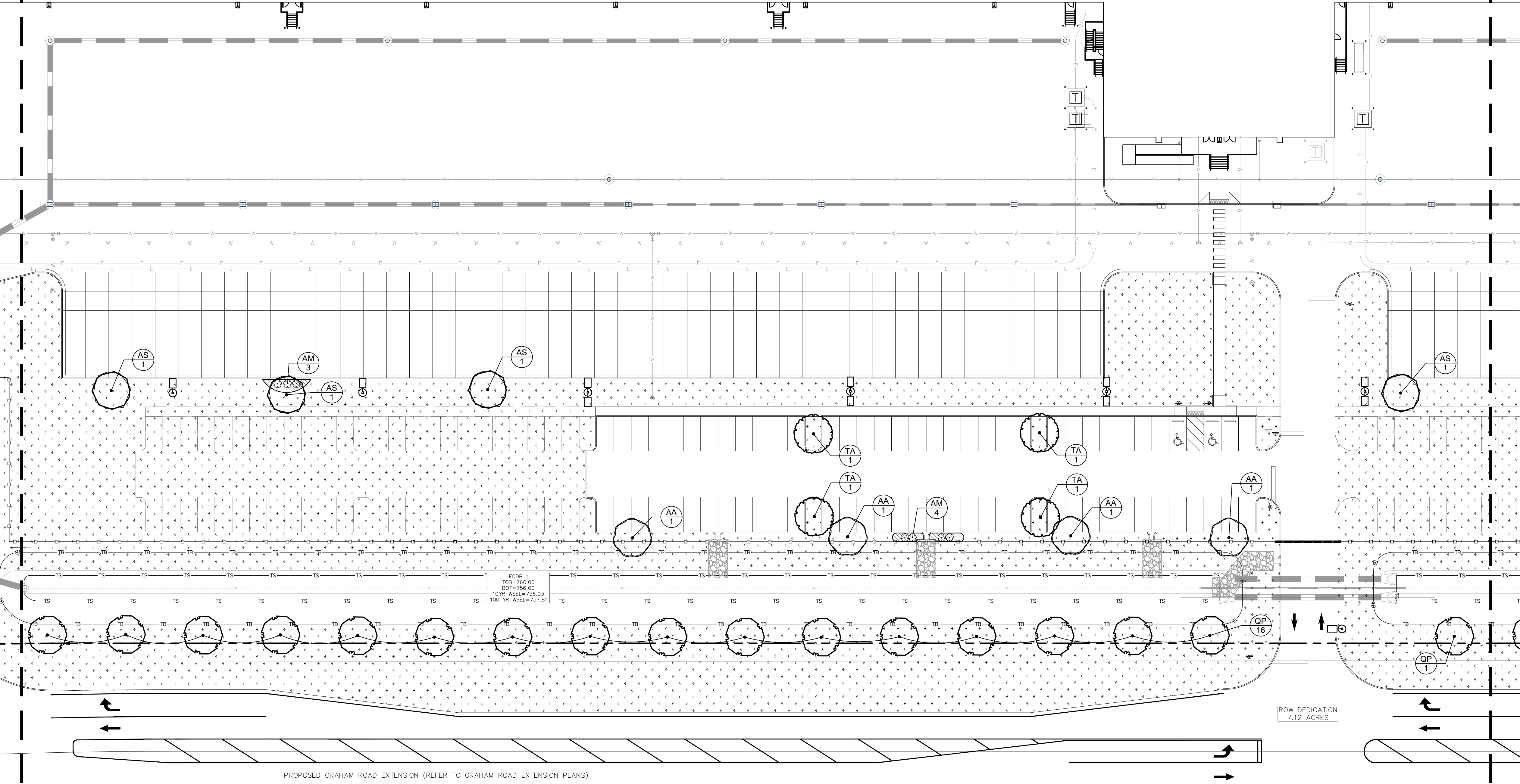
1000000

REVISIONS

BY

Drawing name: K:\IND_LEV\170350000_cold-summit-franklin\170350000-landscape-plan.dwg L1.2 Nov 03, 2022 2:46pm by: Kate Polack
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

MATCHLINE - SEE SHEET L1.1
MATCHLINE - SEE SHEET L1.2

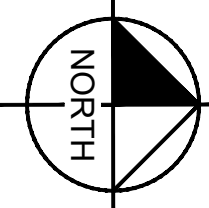


MATCHLINE - SEE SHEET L1.5
MATCHLINE - SEE SHEET L1.2

LOT 1
28.81 ACRES

Indiana Utilities Protection Service

Call 811
before you dig



GRAPHIC SCALE IN FEET
0 15' 30' 60'

Kimley»Horn
©2022 KIMLEY-HORN AND ASSOCIATES, INC.
250 EAST 96TH STREET, SUITE 550,
INDIANAPOLIS, IN 46240
WWW.KIMLEY-HORN.COM

SCALE: AS NOTED
DESIGNED BY CDC
DRAWN BY: KGP
CHECKED BY: BAS



COLD SUMMIT DEVELOPMENT

LANDSCAPE PLAN

**COLD SUMMIT
FRANKLIN, IN**
SEC GRAHAM RD & EARLYWOOD DR

ORIGINAL ISSUE:
11/3/2022

KHA PROJECT NO.
170350000

SHEET NUMBER

L1.2

NO. DATE BY

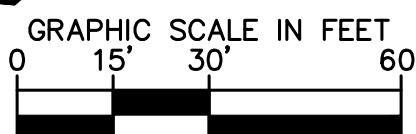
REVISIONS

[illegible]

MATCHLINE - SEE SHEET L1.3

MATCHLINE - SEE SHEET L1.6
MATCHLINE - SEE SHEET L1.3

Call 811
before you dig



BE

T.

AS

AM

4

QF

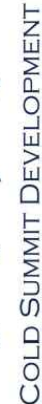
EDDB 2
TOB=760.00
BOT=756.00
10YR WSEL=758.23
100YR WSEL=759.05

**COLD SUMMIT
FRANKLIN, IN**
SEC GRAHAM RD & EARL YWOOD DR

ORIGINAL ISSUE:
11/3/2022
KHA PROJECT NO
170350000

L1.3

LANDSCAPE PLAN



DESIGNED BY: CDC

Agency

PHONE: 317-218-9560
WWW.KIMLEY-HORN.COM

DESIGNED BY: CDC

DESIGNED BY: CDC

CHECKED BY: BAS

Drawing name: K:\IND_LEV\170350000_cold-summit-franklin\12 Design\CADD\plansheets\110-LANDSCAPE PLAN.dwg L1.4 Nov 03, 2022 2:46pm by: Kate Polack

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

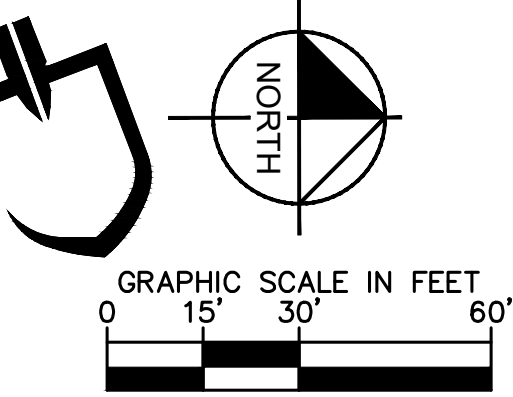
MATCHLINE - SEE SHEET L1.4
MATCHLINE - SEE SHEET L1.1

GRAHAM ROAD

GRAHAM ROAD

MATCHLINE - SEE SHEET L1.4
MATCHLINE - SEE SHEET L1.5

Indiana Utilities Protection Service
Call 811
before you dig



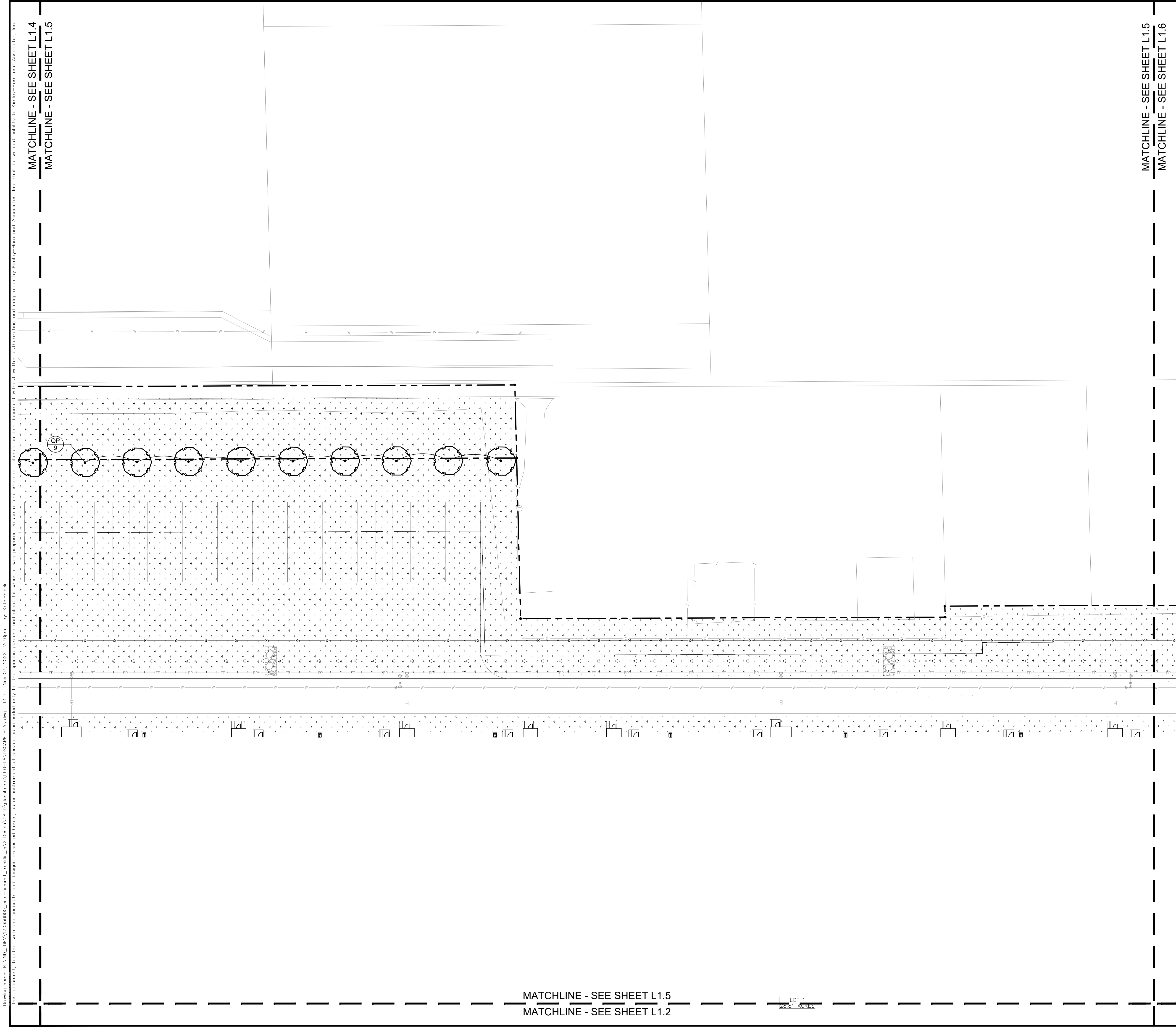
ORIGINAL ISSUE: 11/3/2022		COLD SUMMIT DEVELOPMENT		LANDSCAPE PLAN		Kimley»Horn		SCALE: AS NOTED DESIGNED BY: CDC		No.		REVISIONS		DATE		BY	
KHA PROJECT NO. 170350000		COLD SUMMIT DEVELOPMENT		LANDSCAPE PLAN		Kimley»Horn		DRAWN BY: KGP CHECKED BY: BAS		No.		REVISIONS		DATE		BY	
SHEET NUMBER L1.4		COLD SUMMIT DEVELOPMENT		LANDSCAPE PLAN		Kimley»Horn		DRAWN BY: KGP CHECKED BY: BAS		No.		REVISIONS		DATE		BY	

©2022 KIMLEY-HORN AND ASSOCIATES, INC.
INDIANAPOLIS, IN 46240
WWW.KIMLEY-HORN.COM



LANDSCAPE PLAN

COLD SUMMIT
FRANKLIN, IN
SEC GRAHAM RD & EARLYWOOD DR



Indiana Utilities Protection Service

Call 811
before you dig

Call 811
before you dig

GRAPHIC SCALE IN FEET
0 15' 30' 60'

NORTH

ORIGINAL ISSUE: 11/3/2022	COLD SUMMIT DEVELOPMENT		LANDSCAPE PLAN		COLD SUMMIT FRANKLIN, IN SEC GRAHAM RD & EARLYWOOD DR	
KHA PROJECT NO. 170350000	NOT APPROVED FOR CONSTRUCTION		Kimley»Horn		No.	
SHEET NUMBER L1.5	AS NOTED		DESIGNED BY: CDC		REVISIONS	
	DRAWN BY: KGP		CHECKED BY: BAS		DATE	
					BY	

<u>DECIDUOUS TREES</u>	<u>QTY</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>	<u>CAL</u>	<u>HT</u>
AA	10	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	B & B	2.5" CAL MIN	
AS	9	ACER SACCHARUM	SUGAR MAPLE	B & B	2.5" CAL MIN	
LM	30	LIQUIDAMBAR STYRACIFLUA 'MORAINÉ'	MORAINÉ SWEET GUM	B & B	2.5" CAL MIN	
QP	53	QUERCUS PALUSTRIS	PIN OAK	B & B	2.5" CAL MIN	
TA	9	TILIA AMERICANA	AMERICAN LINDEN	B & B	2.5" CAL MIN	
<u>SHRUBS</u>	<u>QTY</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>	<u>SPACING</u>	<u>SIZE</u>
AM	19	ARONIA MELANOCARPA	BLACK CHOKEBERRY	---	SEE PLAN	18" HT MIN
BE	16	BUXUS MICROPHYLLA 'GREEN VELVET'	GREEN VELVET BOXWOOD	---	SEE PLAN	18" HT MIN

LANDSCAPE NOTES

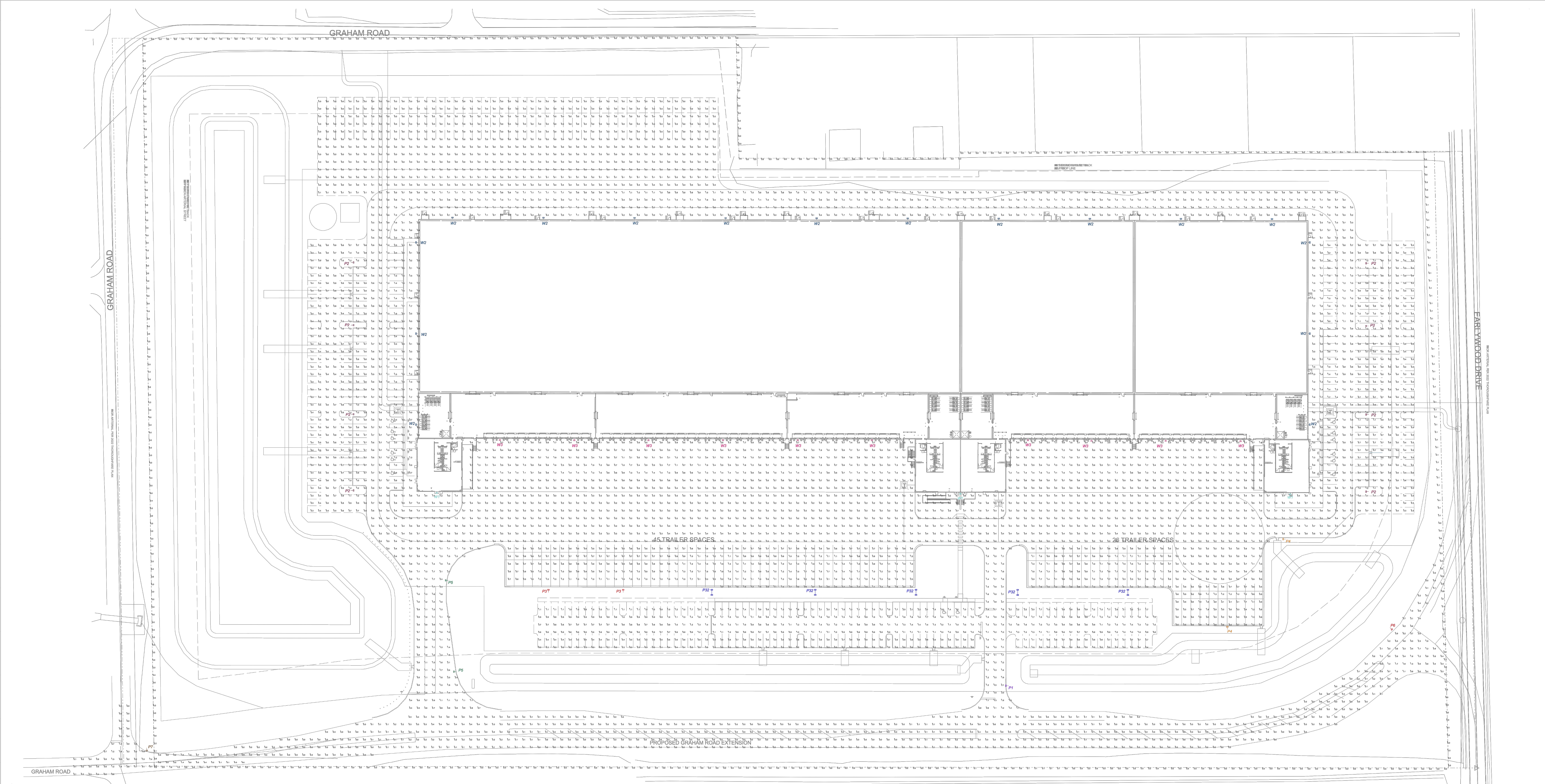
-
- 2X ROOTBALL WIDTH
- SHREDDED HARDWOOD MULCH
- SPADE EDGE
- EXCAVATED BACKFILL
- TAMPED BACKFILL
- SUBGRADE
- NOTES:
1. INSPECT TREE FOR DAMAGED BRANCHES, APPLY CORRECTIVE PRUNING
 2. SET ROOT BALL ON UNEXCAVATED OR TAMPED SOIL. TOP OF ROOTBALL SHALL BE TWO INCHES ABOVE SURROUNDING GRADE WITH BURLAP AND WIRE BASKET INTACT.
 3. REMOVE WIRE BASKET AND BURLAP DOWN FOUR TO SIX INCHES BELOW TOP OF ROOT BALL. REMOVE ALL TWINE AND (IF USED), SYNTHETIC MATERIAL. REMOVE OR CORRECT GIRDLING ROOTS.
 4. TAMP EXCAVATED SOIL AROUND BASE OF ROOTBALL.
 5. BACKFILL REMAINDER EXCAVATED SOIL TAMPED LIGHTLY. HIGH CLAY OR POOR SOIL SHALL RECEIVE SOIL AMENDMENT PER LANDSCAPE NOTES.
 6. WATER THOROUGHLY WITHIN TWO HOURS USING 10 TO 15 GALLONS OF WATER.
 7. APPLY MULCH IN EVEN LAYER, KEEPING AWAY FROM ROOT FLARE.
 8. FINAL LOCATION OF TREE TO BE APPROVED BY OWNER.
- 1 TREE PLANTING
- NTS

-
- MINIMUM 6" BEYOND ROOT BALL
- SHREDDED HARDWOOD MULCH
- SPADED BED EDGE
- AMENDED SOIL
- SUBGRADE

- ## 2 SHRUB PLANTING

PERMANENT SEEDING
AMERITURF FRONTRUNNER BLEND TALL
FESCUE; APPLY AT A RATE OF 350 LBS/ACRE
(8LBS/1000 SQFT)

MULCH
HARDWOOD SHREDDED MULCH,
NATURAL BROWN COLOR



PROPOSED SITE LIGHTING - Optec
Scale: 1 inch= 50 Ft.

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Graham Road	Illuminance	Fc	1.67	7.4	0.0	N.A.	N.A.
Graham Road Extension	Illuminance	Fc	0.26	5.9	0.0	N.A.	N.A.
Property Line	Illuminance	Fc	0.09	9.1	0.0	N.A.	N.A.
Auto Parking - E	Illuminance	Fc	1.12	5.8	0.2	5.6	29.0
Auto Parking - SW	Illuminance	Fc	1.04	2.2	0.4	2.6	5.5
Auto Parking - W	Illuminance	Fc	1.20	4.4	0.4	3.0	11.0
Entrance Exit - E	Illuminance	Fc	1.34	2.1	0.8	1.7	2.6
Entrance Exit - W	Illuminance	Fc	0.99	2.4	0.3	3.3	8.0
Future Parking - E	Illuminance	Fc	0.62	1.2	0.3	2.1	4.0
Future Parking - E - @ Bldg	Illuminance	Fc	1.90	3.4	1.4	1.4	2.4
Future Parking - SE	Illuminance	Fc	1.10	2.2	0.4	2.8	5.5
Future Parking - SW	Illuminance	Fc	0.77	2.1	0.3	2.6	7.0
Future Parking - W	Illuminance	Fc	0.63	1.3	0.3	2.1	4.3
Future Trailer Parking - NW	Illuminance	Fc	0.04	0.5	0.0	N.A.	N.A.
Service Drive - N	Illuminance	Fc	1.56	4.9	0.2	7.8	24.5
Trailer Parking	Illuminance	Fc	1.20	6.4	0.4	3.0	16.0
Truck Apron	Illuminance	Fc	0.99	6.5	0.2	5.0	32.5

Luminaire Schedule								
Symbol	Label	Qty	LLF	Lumens	Watts	Mounting	Manufacturer	Catalog
	P1	1	0.900	19097	150	POLE MTD, 28' AFG (25' POLE, 3' BASE)	OPTEC LED LIGHTING	OLA1-150-50-5
	P2	8	0.900	10185	80	POLE MTD, 28' AFG (25' POLE, 3' BASE)	OPTEC LED LIGHTING	OLA1-080-50-5
	P3	2	0.900	15278	120	POLE MTD, 28' AFG (25' POLE, 3' BASE)	OPTEC LED LIGHTING	OLA1-120-50-5
	P32	5	0.900	15278	120	POLE MTD, 28' AFG (25' POLE, 3' BASE)	OPTEC LED LIGHTING	OLA1-120-50-5
	P4	2	0.900	15708	119.9	POLE MTD, 28' AFG (25' POLE, 3' BASE)	OPTEC LED LIGHTING	OLA1-120-UNV-50-4
	P5	2	0.900	22917	180	POLE MTD, 28' AFG (25' POLE, 3' BASE)	OPTEC LED LIGHTING	OLA1-180-50-5
	P6	1	0.900	19345	149.99	POLE MTD, 28' AFG (25' POLE, 3' BASE)	OPTEC LED LIGHTING	OLA1-150-UNV-50-4
	P7	1	0.900	20250	150	POLE MTD, 28' AFG (25' POLE, 3' BASE)	OPTEC LED LIGHTING	OLA1-150-UNV-50-2
	W1	3	0.900	10791	79.95	BLDG MTD, 22' AFG	OPTEC LED LIGHTING	OLA1-080-UNV-50-4
	W2	16	0.900	16920	119.8	BLDG MTD, 22' AFG	OPTEC LED LIGHTING	OLA1-120-UNV-50-3
	W3	10	0.900	15708	119.9	BLDG MTD, 28' AFG	OPTEC LED LIGHTING	OLA1-120-UNV-50-4

CALCULATION NOTES:
A. BASED ON THE INFORMATION PROVIDED, ALL DIMENSIONS AND LUMINAIRE LOCATIONS SHOWN REPRESENT RECOMMENDED POSITIONS. THE ENGINEER AND/OR ARCHITECT MUST DETERMINE THE APPLICABILITY OF THE LAYOUT TO EXISTING OR FUTURE FIELD CONDITIONS.
B. THIS LIGHTING PLAN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH THE ILLUMINATING ENGINEERING SOCIETY (IES) APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRES MAY VARY DUE TO CHANGES IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS/LED'S AND OTHER VARIABLE FIELD CONDITIONS.
C. CALCULATIONS SHOWN ARE MAINTAINED ILLUMINANCE UNLESS NOTED OTHERWISE.
D. CALCULATIONS ARE TAKEN AT 4' AFG UNLESS NOTED OTHERWISE.
E. UNLESS NOTED OTHERWISE, EXISTING POLES ARE BEING USED IN THE EXISTING LOCATION.

OWNER ILLUMINANCE CRITERIA:
TRUCK APRON 1.0 FC AVG., 20:1 MAX:MIN; 4'-0" AFG
TRUCK PARKING 0.5 FC AVG., 20:1 MAX:MIN; 4'-0" AFG
AUTOMOTIVE PARKING 1.0 FC AVG., 20:1 MAX:MIN; 4'-0" AFG



11785 HIGHWAY DR.
CINCINNATI, OH 45241
513-761-6360

LIGHTING PROPOSAL: BRLC22-073				
COLD SUMMIT GRAHAM ROAD & EARLYWOOD DRIVE FRANKLIN, IN 46131				
By: C.B.	Date: 11/2/2022	Scale: AS NOTED	REV: 2	SHEET 1 OF 1