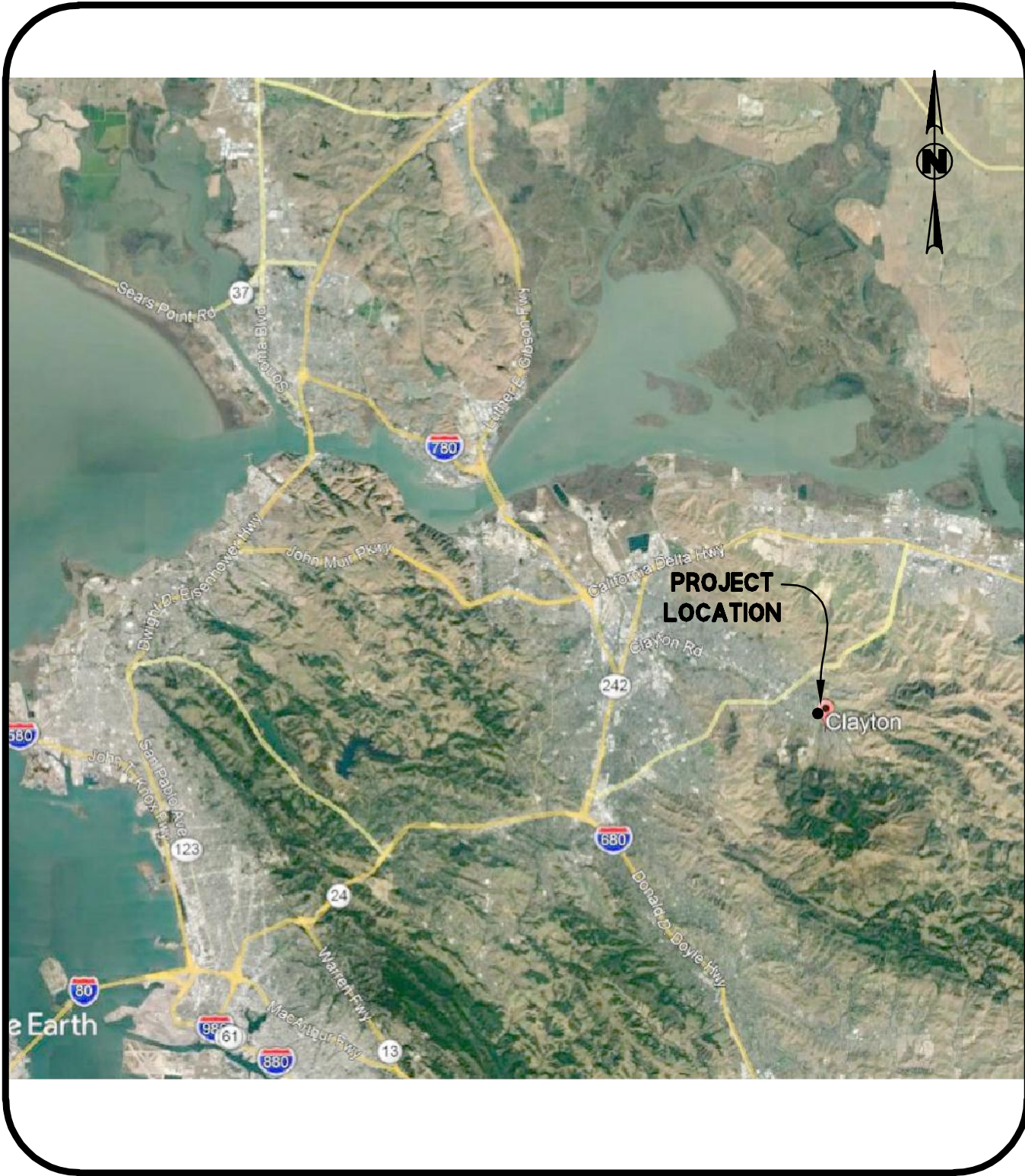


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PLOT TIME: 04-09-21 11:34am PLOTTED BY: poon

ABBREVIATIONS

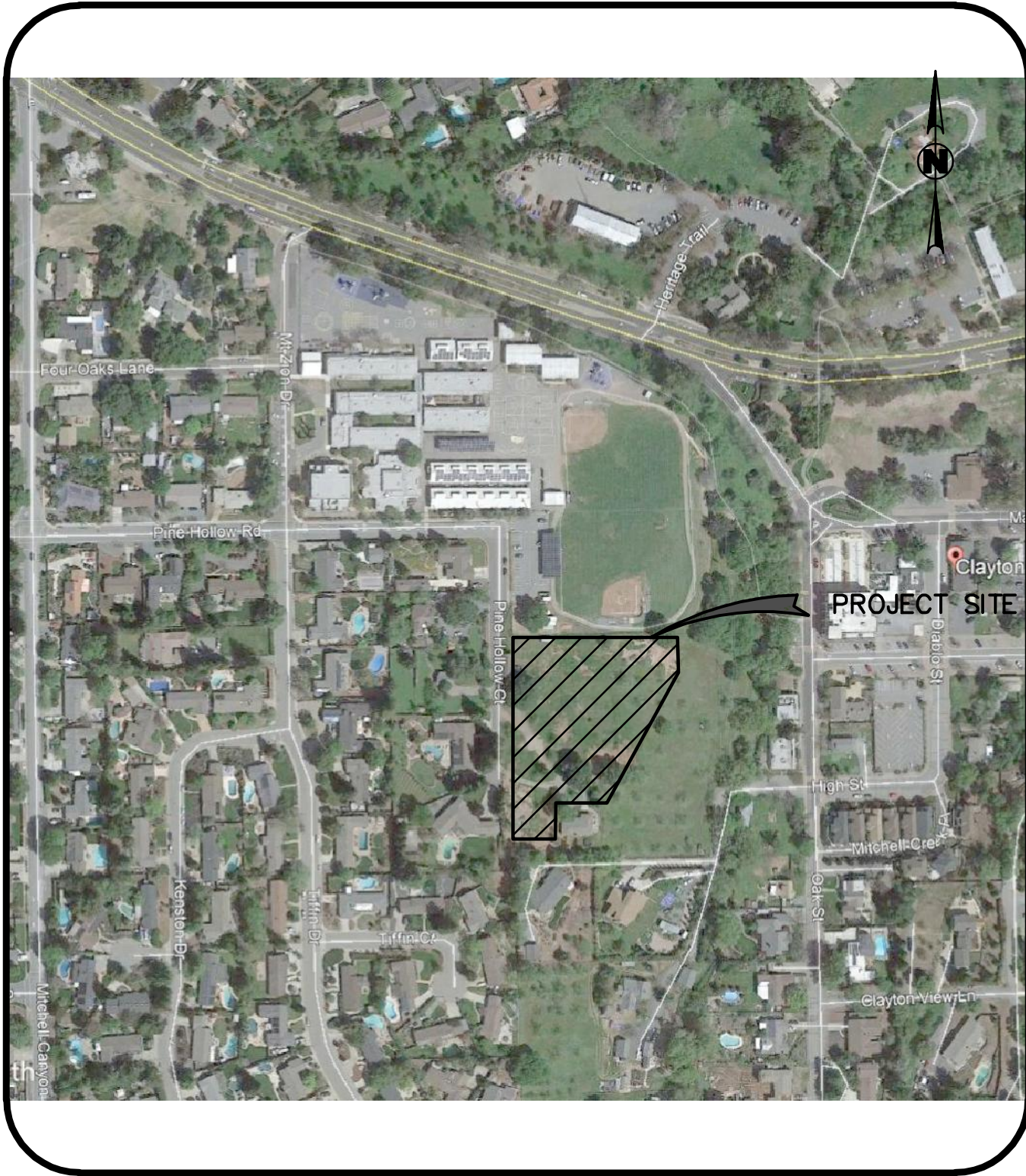
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
AB	AGGREGATE BASE	LG	LIP OF GUTTER
AC	ASPHALT CONCRETE	LP	LOW POINT
AD	AREA DRAIN	LT	LEFT
AGG	AGGREGATE	MAX	MAXIMUM
APPROX	APPROXIMATE	MH	MANHOLE
BC	BEGINNING OF CURVE	MIN	MINIMUM
BLDG	BUILDING	MON	MONUMENT
BM	BENCH MARK	(N)	NORTH / NEW
BO	BLOWOFF	NO., #	NUMBER
BOV	BLOWOFF VALVE	NTS	NOT TO SCALE
BW	BACK OF WALK/ BOTTOM OF WALL	P.A.E.	PUBLIC ACCESS EASEMENT
C&G	CURB & GUTTER	P.C.C.	POINT OF COMPOUND CURVE or PORTLAND CEMENT CONCRETE
CI	CURB INLET	PE	PAD ELEVATION
CL	CENTERLINE	PG&E	PACIFIC GAS AND ELECTRIC
CMP	CORRUGATED METAL PIPE	PL	PROPERTY LINE
CO	CLEANOUT	P.O.C.	POINT OF CONNECTION
CONC	CONCRETE	P.O.R.C.	POINT OF REVERSE CURVE
DI	DROP INLET	PROP	PROPOSED
DIP	DUCTILE IRON PIPE	P.S.D.E.	PRIVATE STORM DRAIN EASEMENT
DIA	DIAMETER	P.S.E.	PUBLIC SERVICE EASEMENT
DW	DOMESTIC WATER	PT	POINT
D/W	DRIVEWAY	P.U.E.	PUBLIC UTILITY EASEMENT
DWG	DRAWING	PV	PAVEMENT
E	ELECTRIC	PVC	POLYVINYL CHLORIDE
(E)	EAST / EXISTING	R	RADIUS
EC	END OF CURVE	RCP	REINFORCED CONCRETE PIPE
EL	ELEVATION	RCW	RECYCLED WATER
EP	EDGE OF PAVEMENT	RIM	RIM ELEVATION
E.V.A.E.	EMERGENCY VEHICLE ACCESS EASEMENT	RT	RIGHT
		R/W	RIGHT OF WAY
		(S)	SLOPE
EW	EACHWAY	SD	SOUTH
EX	EXISTING	SD	STORM DRAIN
(F)	FUTURE	S.D.E.	STORM DRAIN EASEMENT
F/C	FACE OF CURB	SDMH	STORM DRAIN MANHOLE
FF	FINISHED FLOOR ELEVATION	SHT.	SHEET
FG	FINISHED GRADE	SS	SANITARY SEWER
FH	FIRE HYDRANT	SSMH	SANITARY SEWER MANHOLE
FL	FORCE MAIN	ST	STREET
FM	FACE OF BUILDING	STA	STATION
FOB	FINISHED PAVEMENT	STD	STANDARD
FT	FEET	S/W	SIDEWALK
G	GAS	T OR TELE	TELEPHONE
GB	GRADE BREAK	T&B	TOP AND BOTTOM
GE	GARAGE ELEVATION	TC	TOP OF CURB
GM	GAS METER	TEMP	TEMPORARY
HP	HIGH POINT	TG	TOP OF GRATE
HV	HIGH VOLTAGE	TP	TOP OF PAVEMENT
I.E.E.	INGRESS/EGRESS EASEMENT	TYP	TYPICAL
INV	INVERT	VERT.	VERTICAL
IRR	IRRIGATION	W	WATER
JT	JOINT TRENCH	(W)	WEST
LAT	LATERAL	W/	WITH
L	LENGTH	WL	WATERLINE
LF	LINEAR FEET	WM	WATER METER
		WV	WATER VALVE

CLAYTON COMMUNITY CHURCH  
1207 PINE HOLLOW COURT  
CLAYTON, CONTRA COSTA COUNTY, CA



LOCATION MAP

N.T.S.



VICINITY MAP

N.T.S.

PROJECT INFORMATION

PROPERTY DESCRIPTION:	APN 119-050-036 EXISTING LAND USE: RESIDENTIAL  PROPOSED LAND USE: COMMERCIAL AND RESIDENTIAL
OWNER/SUBDIVIDER:	CLAYTON COMMUNITY CHURCH 6055 MAIN STREET CLAYTON, CA 94517
ENGINEER:	BKF ENGINEERS 255 SHORELINE DRIVE, SUITE 200 REDWOOD CITY, CA 94065 (650)482-6300
ACREAGE: EXISTING	4.24 AC
PROPOSED	4.24 AC
STORM DRAIN:	NONE
SEWAGE DISPOSAL:	CITY OF CLAYTON
WATER SUPPLY:	CONTRA COSTA WATER DISTRICT
GAS AND ELECTRIC:	PG&E
TELEPHONE:	AT&T
FLOOD ZONE:	SITE CURRENTLY FALLS WITHIN AREAS IF MINIMAL FLOOD ZONE HAZARD IN ZONE X BASED ON FIRM MAP NUMBER 06013C0304G, EFFECTIVE MARCH 21, 2017.

SHEET INDEX

C-1	TITLE SHEET
C-2	EXISTING SITE CONDITIONS
C-3	GRADING & DRAINAGE PLAN
C-4	STORMWATER CONTROL PLAN
C-5	UTILITY PLAN
C-6	CONSTRUCTION DETAILS
C-7	CONSTRUCTION DETAILS
C-8	CONSTRUCTION DETAILS

GENERAL NOTES

1. EROSION CONTROL PLAN WILL CONFORM TO APPLICABLE CITY, STATE AND FEDERAL STANDARDS.

BENCHMARK

ALL ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88 VERTICAL DATUM EXPRESSED IN US FEET. NGS BENCHMARK PID: DE8492 ELEVATION 412.9.

BASIS OF BEARING

BOUNDARY AND EASEMENTS SHOWN HEREON BASED UPON A PRELIMINARY TITLE REPORT, DATED MAY 24, 2012, FURNISHED BY THE OWNER AND REPRESENTS RECORD LOCATION, SUBJECT TO FINAL BOUNDARY RESOLUTION ADJUSTMENT.

Drawing is only to scale when printed at 24"x36"

PLANNING DEPARTMENT SUBMITTAL

1027 PINE HOLLOW CT, CLAYTON  
CLAYTON COMMUNITY CHURCH  
04.02.2021

TITLE SHEET  
C-1  
SCALE N/A









Project Name: Clayton Community Church  
Project Type: Treatment and Flow Control  
APN: 119-050-036  
Drainage Area: 110.256  
Mean Annual Precipitation: 17.5

Self-Treating DMAs

DMA Name	Area (sq ft)
ST1	9,087.0
ST2	1,505.0
ST3	4,033.0
ST4	32.0
ST5	90.0
ST6	40.0

II. Self-Retaining Areas

DMA Name	Area (sq ft)
SR1	90

III. Areas Draining to Self-Retaining Areas

DMA Name	Area (sq ft)	Surface Type	Runoff Factor	Product (Area x Runoff Factor) [A]	Receiving Self-Retaining DMA	Receiving Self-Retaining DMA Area (sq ft) [B]	Ratio [A]/[B]
DMA6	43	Concrete or Asphalt	1.0	43.0	SR1	90	0.48

IV. Areas Draining to IMPs

IMP Name: IMP1

IMP Type: Bioretention + Vault

Soil Group: IMP1

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
DMA1	3,965	Concrete or Asphalt	1.00	3,965	IMP Sizing Factor	1.000	159	458
Total				3,965	IMP Sizing Factor	1.099	159	458
Area Volume				0.040	1.000	75	294	314
Maximum Underdrain Flow (cfs)				0.152	1.099	313	426	0.00
Orifice Diameter (in)								0.31

IMP Name: IMP2

IMP Type: Bioretention + Vault

Soil Group: IMP2

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
DMA2	1,873	Concrete or Asphalt	1.00	1,873	IMP Sizing Factor	1.000	75	294
Total				1,873	IMP Sizing Factor	1.099	75	294
Area Volume				0.040	1.000	313	426	0.00
Maximum Underdrain Flow (cfs)				0.152	1.099	313	426	0.00
Orifice Diameter (in)								0.22

IMP Name: IMP3

IMP Type: Bioretention + Vault

Soil Group: IMP3

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
DMA3A	4,725	Concrete or Asphalt	1.00	4,725	IMP Sizing Factor	1.000	193	262
DMA3B	222	Landscaped	0.50	111	IMP Sizing Factor	1.099	808	809
Total				4,836	IMP Sizing Factor	1.099	193	262
Area Volume				0.040	1.000	808	809	0.01
Maximum Underdrain Flow (cfs)				0.152	1.099	808	809	0.01
Orifice Diameter (in)								0.35

IMP Name: IMP4

IMP Type: Bioretention + Vault

Soil Group: IMP4

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
DMA4A	2,537	Conventional Roof	1.00	2,537	IMP Sizing Factor	1.000	101	279
Total				2,537	IMP Sizing Factor	1.099	101	279
Area Volume				0.040	1.000	426	426	0.00
Maximum Underdrain Flow (cfs)				0.152	1.099	426	426	0.00
Orifice Diameter (in)								0.25

IMP Name: IMP5

IMP Type: Bioretention + Vault

Soil Group: IMP5

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
DMA5A	22,659	Concrete or Asphalt	1.00	22,659	IMP Sizing Factor	1.000	1,107	1,672
DMA5B	5,023	Conventional Roof	1.00	5,023	IMP Sizing Factor	1.099	4,624	4,625
Total				27,682	IMP Sizing Factor	1.099	1,107	1,672
Area Volume				0.040	1.000	4,624	4,625	0.03
Maximum Underdrain Flow (cfs)				0.152	1.099	4,624	4,625	0.03
Orifice Diameter (in)								0.83

IMP Name: IMP6

IMP Type: Bioretention + Vault

Soil Group: IMP6

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
DMA6A	23,667	Concrete or Asphalt	1.00	23,667	IMP Sizing Factor	1.000	1,093	1,490
DMA6B	3,588	Conventional Roof	1.00	3,588	IMP Sizing Factor	1.099	4,584	4,585
DMA6C	127	Landscaped	0.50	64	IMP Sizing Factor	1.099	808	809
Total				27,319	IMP Sizing Factor	1.099	1,093	1,490
Area Volume				0.040	1.000	4,584	4,585	0.03
Maximum Underdrain Flow (cfs)				0.152	1.099	4,584	4,585	0.03
Orifice Diameter (in)								0.83

IMP Name: IMP7

IMP Type: Bioretention + Vault

Soil Group: IMP7

DMA Name	Area (sq ft)	Post Project Surface Type	DMA Runoff Factor	DMA Area x Runoff Factor	IMP Sizing	Rain Adjustment Factor	Minimum Area or Volume	Proposed Area or Volume
DMA7	21,424	Concrete or Asphalt	1.00	21,424	IMP Sizing Factor	1.000	857	1,161
Total				21,424	IMP Sizing Factor	1.099	857	1,161
Area Volume				0.040	1.000	3,579	3,580	0.03
Maximum Underdrain Flow (cfs)				0.152	1.099	3,579	3,580	0.03
Orifice Diameter (in)								0.73

Report generated on 4/5/2021 12:00:00 AM by the Contra Costa Clean Water Program IMP Sizing Tool software (version 1.3.1.0).

PLANNING DEPARTMENT SUBMITTAL

1027 PINE HOLLOW CT, CLAYTON  
CLAYTON COMMUNITY CHURCH  
04.02.2021

STORMWATER CONTROL PLAN  
C-4  
SCALE 1"=30'

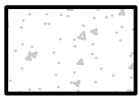
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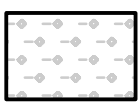
AT-GRADE LINED FLOW-THROUGH PLANTER (FP)



ROOF



CONCRETE/ASPHALT



PLANTERS ON GRADE



UNCAPTURED



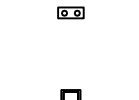
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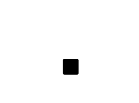
DMA SUB BOUNDARY



PIPE W/ FLOW DIRECTION



SLOTTED UNDERDRAIN



SURFACE FLOW ARROW



ROOF DRAIN



OVERFLOW DRAIN (UNLESS OTHERWISE NOTED)



CLEANOUT



STORM STORAGE PIPE

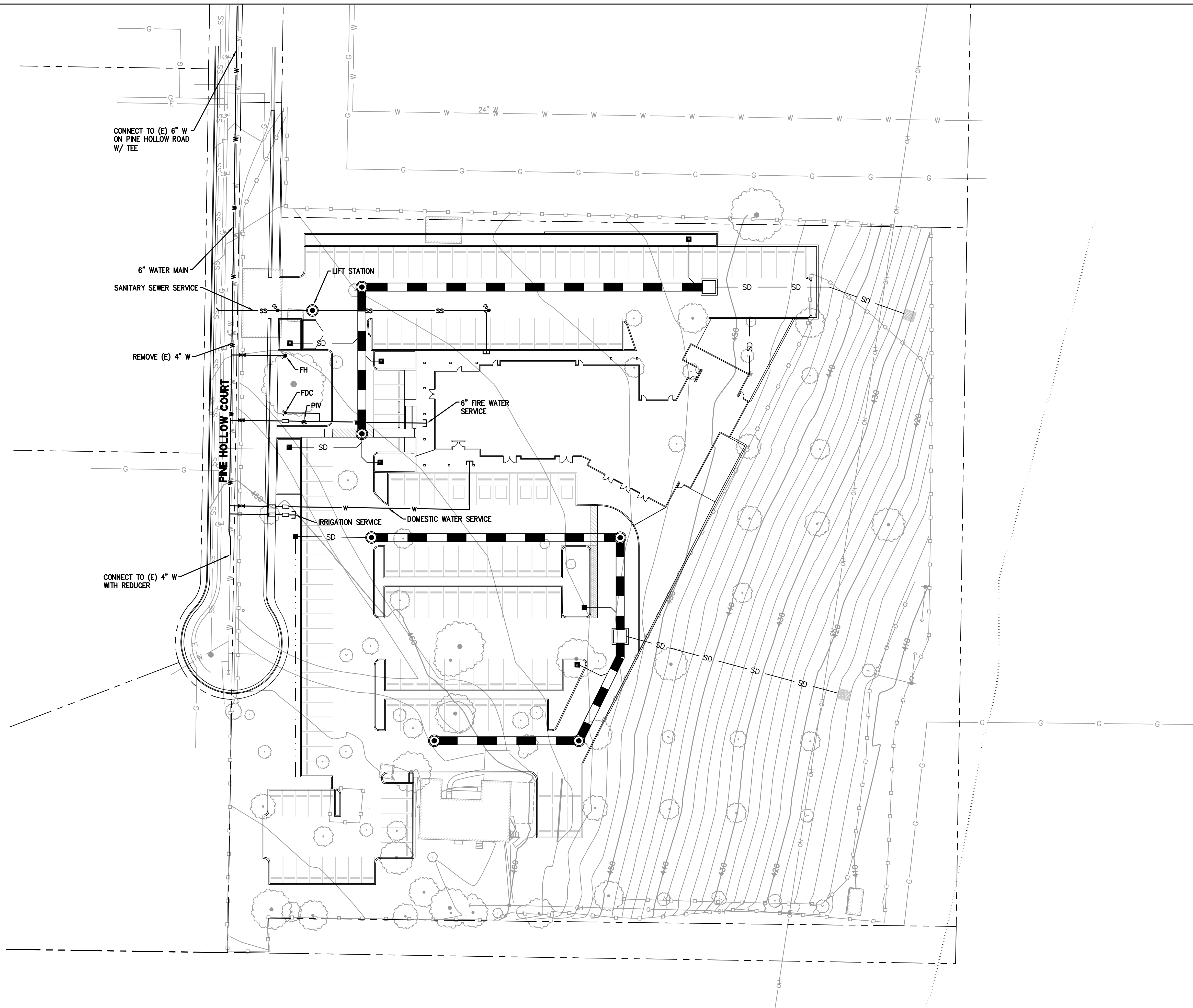
GRAPHIC SCALE



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PLANNING DEPARTMENT SUBMITTAL

1027 PINE HOLLOW CT, CLAYTON  
CLAYTON COMMUNITY CHURCH  
04.02.2021

UTILITY PLAN  
C-5  
SCALE 1"=30'



DRAWING NAME: K:\2019\190264-Clayton\_Community\_Church\ENG\SHEETS\PLANNING\CC\_C6.dwg (C-6)  
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PLOTTED BY: poon

FILE: SEP 05, 2008 12:57 P. B.B. 1 OF 2  
2: CLAYTON STANDARDS (DMS) (2008) (REVISED) (S-15-16-17 AND 2) (CH-BUILDING)

**CURB, GUTTER AND SIDEWALK**

DATE: AUGUST, 2008 SCALE: NONE  
APPROVED: [Signature] CITY ENGINEER

SHEET 1 OF 1  
PAGE S-B

FILE: SEP 05, 2008 12:57 P. B.B. 1 OF 2  
2: CLAYTON STANDARDS (DMS) (2008) (REVISED) (S-15-16-17 AND 2) (CH-BUILDING)

**CATCH BASIN TYPE "B"**

DATE: AUGUST, 2008 SCALE: NONE  
APPROVED: [Signature] CITY ENGINEER

SHEET 1 OF 2  
PAGE D-7

FILE: SEP 05, 2008 12:58 P. B.B. 2 OF 2  
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**CATCH BASIN TYPE "B"**

DATE: AUGUST, 2008 SCALE: NONE  
APPROVED: [Signature] CITY ENGINEER

SHEET 2 OF 2  
PAGE D-7

FILE: SEP 05, 2008 02:00 A. B.B. 1 OF 2  
2: CLAYTON STANDARDS (DMS) (2008) (REVISED) (S-15-16-17 AND 2) (CH-BUILDING)

**TRENCH BACKFILL AND RESURFACING**

DATE: AUGUST, 2008 SCALE: NONE  
APPROVED: [Signature] CITY ENGINEER

SHEET 1 OF 2  
PAGE S-16

FILE: SEP 05, 2008 02:01 A. B.B. 2 OF 2  
2: CLAYTON STANDARDS (DMS) (2008) (REVISED) (S-15-16-17 AND 2) (CH-BUILDING)

**TRENCH BACKFILL AND RESURFACING**

DATE: AUGUST, 2008 SCALE: NONE  
APPROVED: [Signature] CITY ENGINEER

SHEET 2 OF 2  
PAGE S-16

**HYDRANT OUTLET POSITIONS**

DATE: 8/30/10  
SHEET 1 OF 1

SD-5

**RPBPD INSTALLATION DIMENSIONS**

DATE: 8/30/10  
SHEET 2 OF 2

SD-4

**WILKINS 300 SERIES LAY LENGTHS (INCHES)**

DATE: 8/30/10  
SHEET 2 OF 2

SD-18

**WILKINS 475DA (RPDA) & 450 (OCDA) LAY LENGTHS (INCHES)**

DATE: 2/12/14  
SHEET 1 OF 1

SD-19

**SCHEMATIC BUILDING FIRE SERVICE DETAIL**

DATE: 2/12/14  
SHEET 1 OF 1

SD-19

Drawing is only to scale when printed at 24"x36"

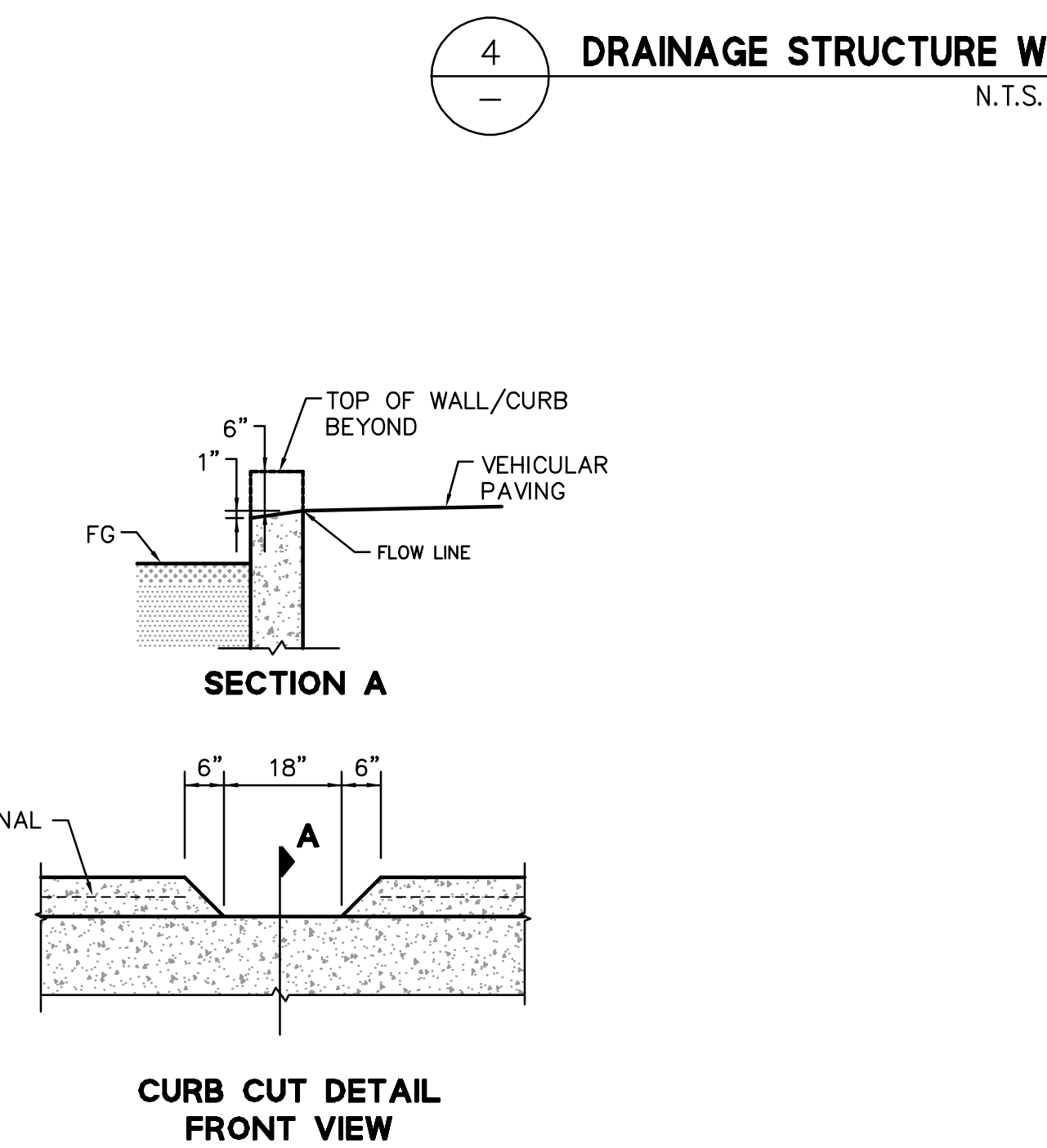
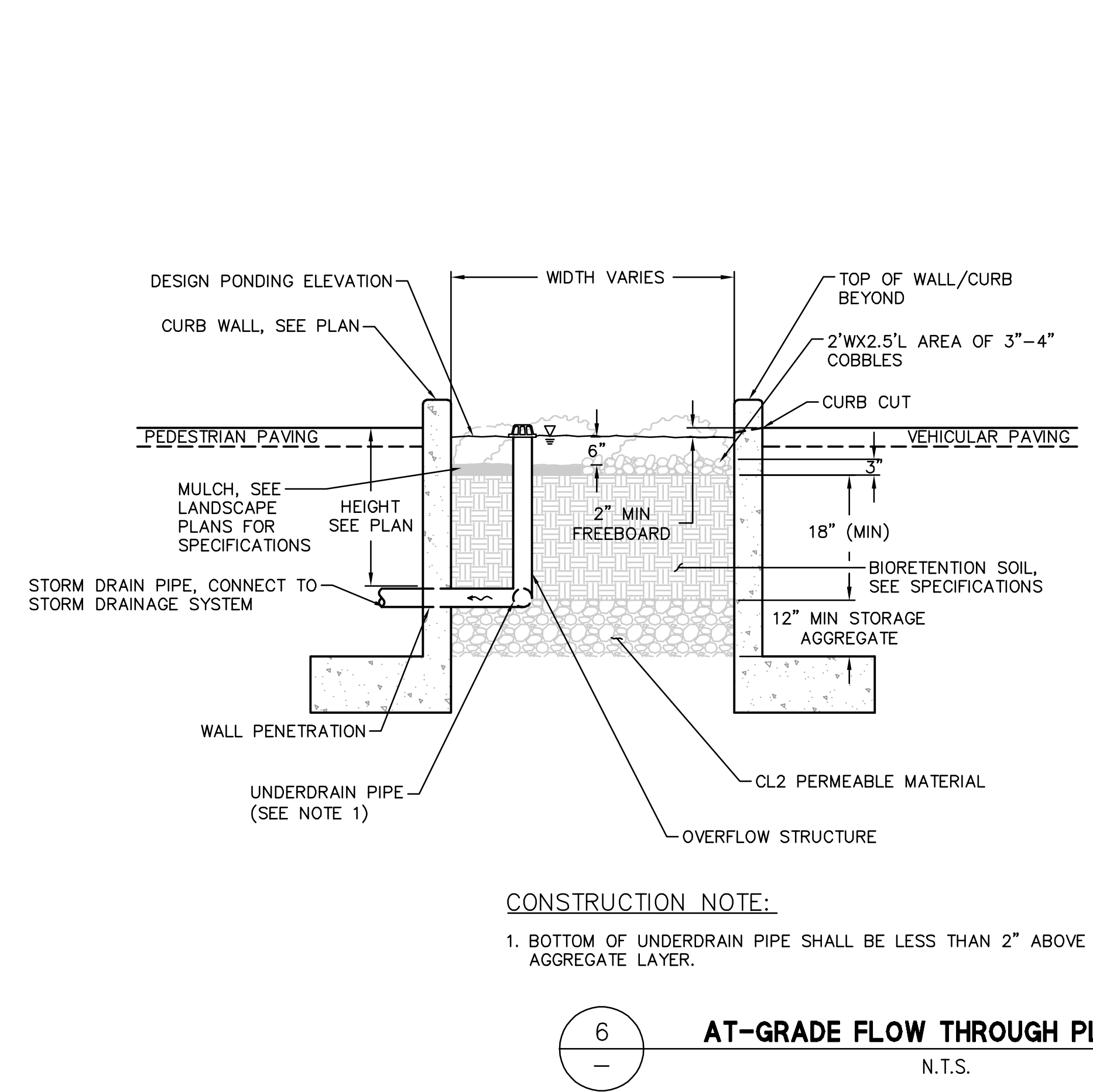
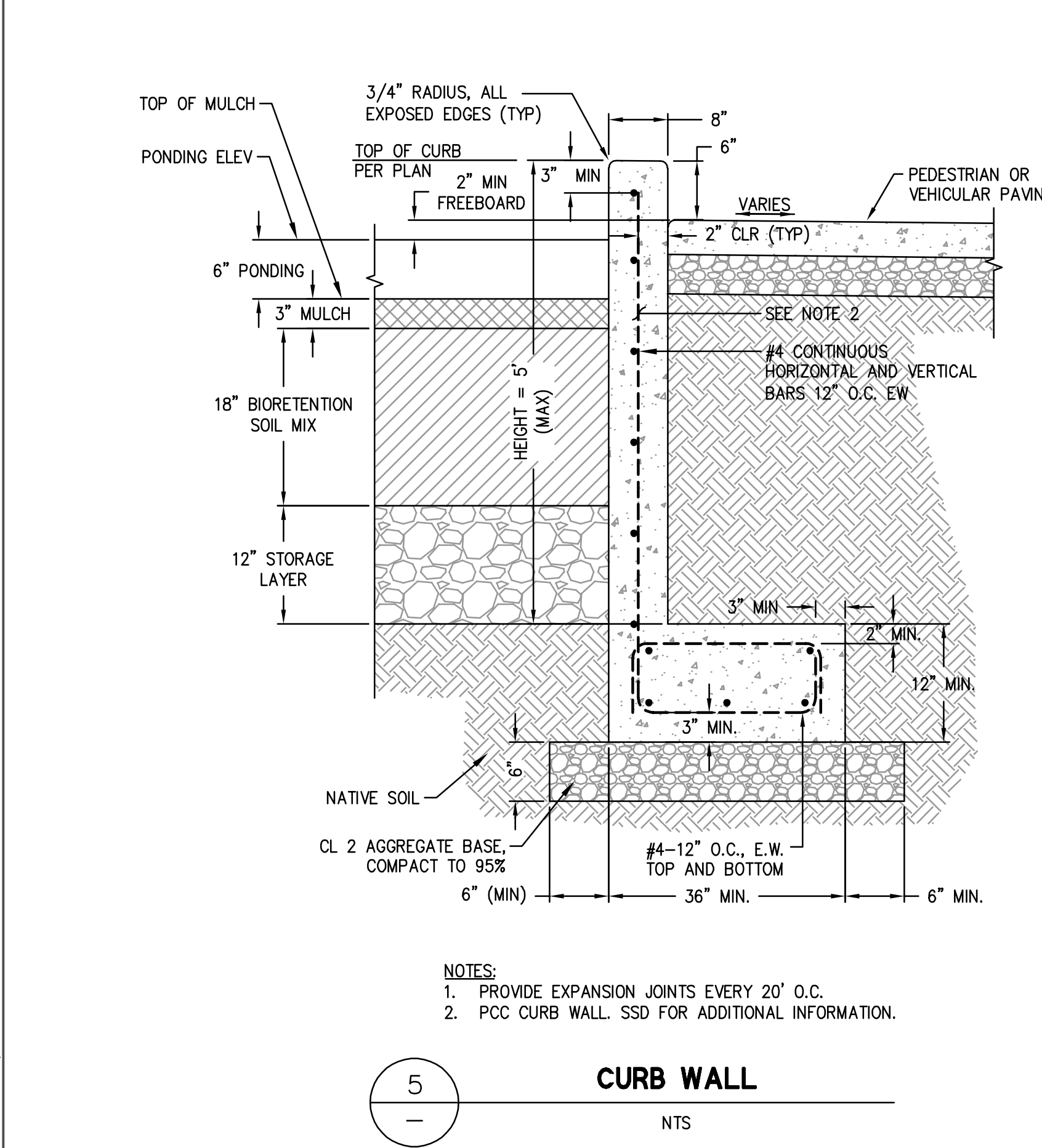
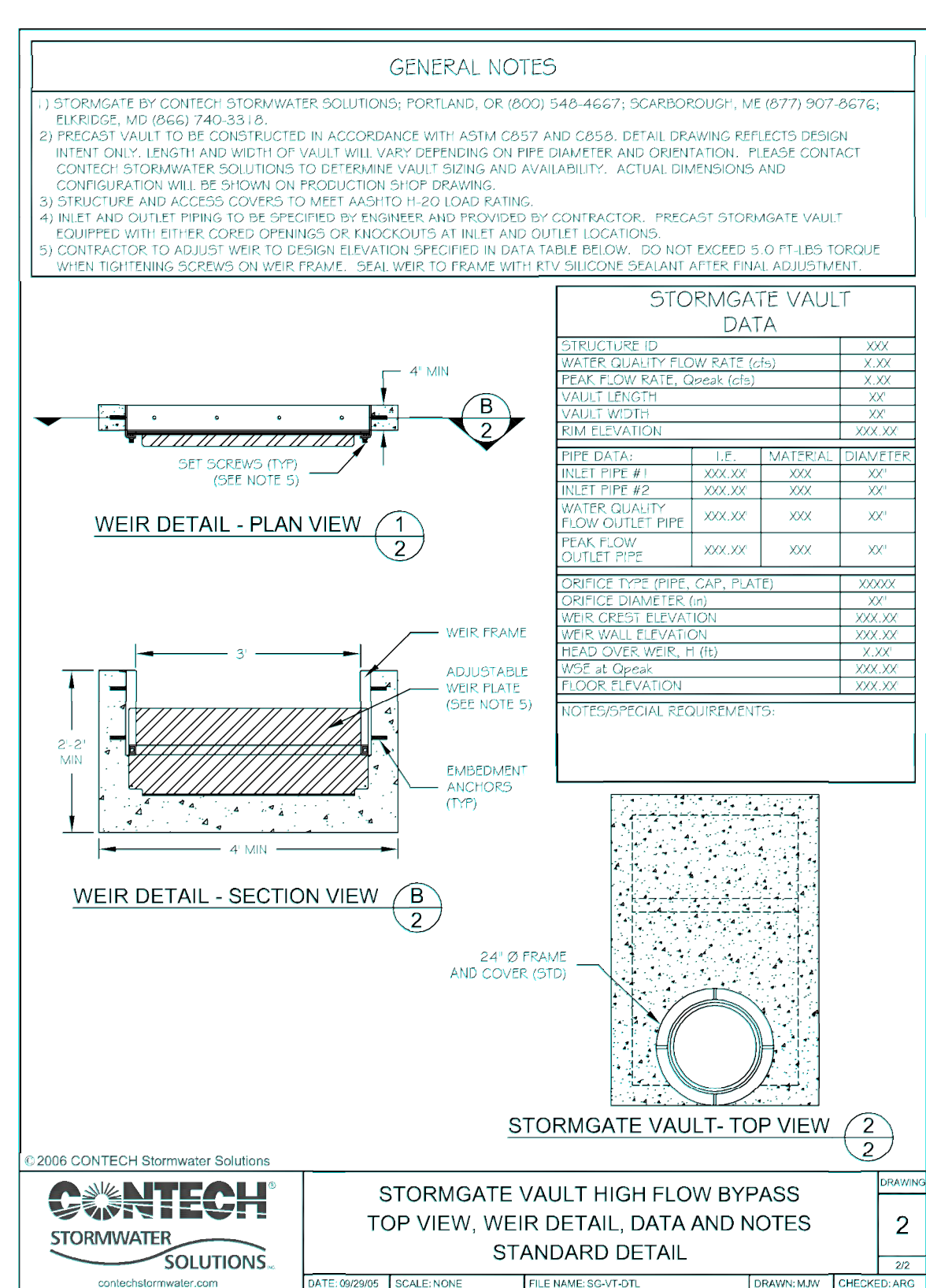
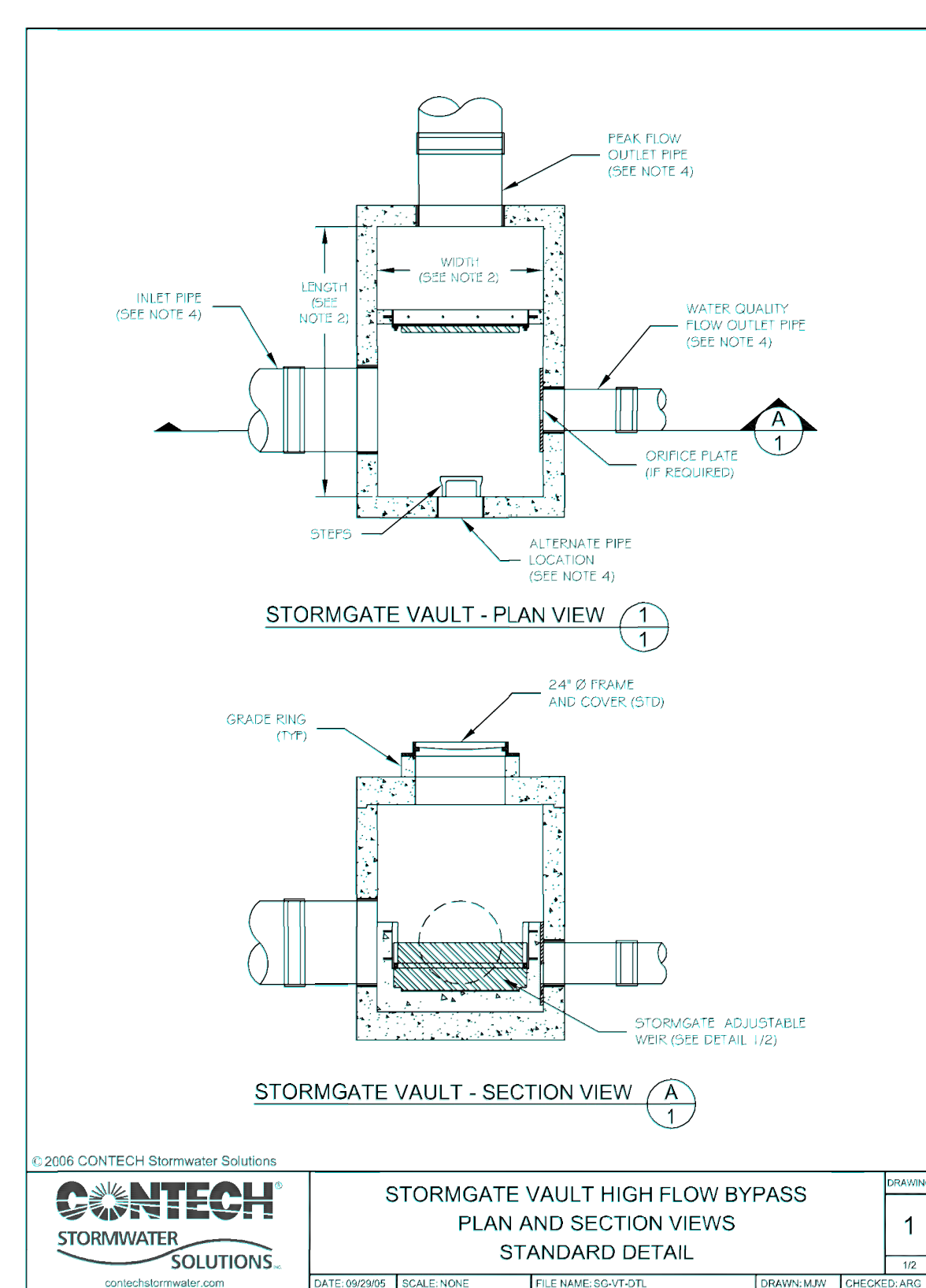
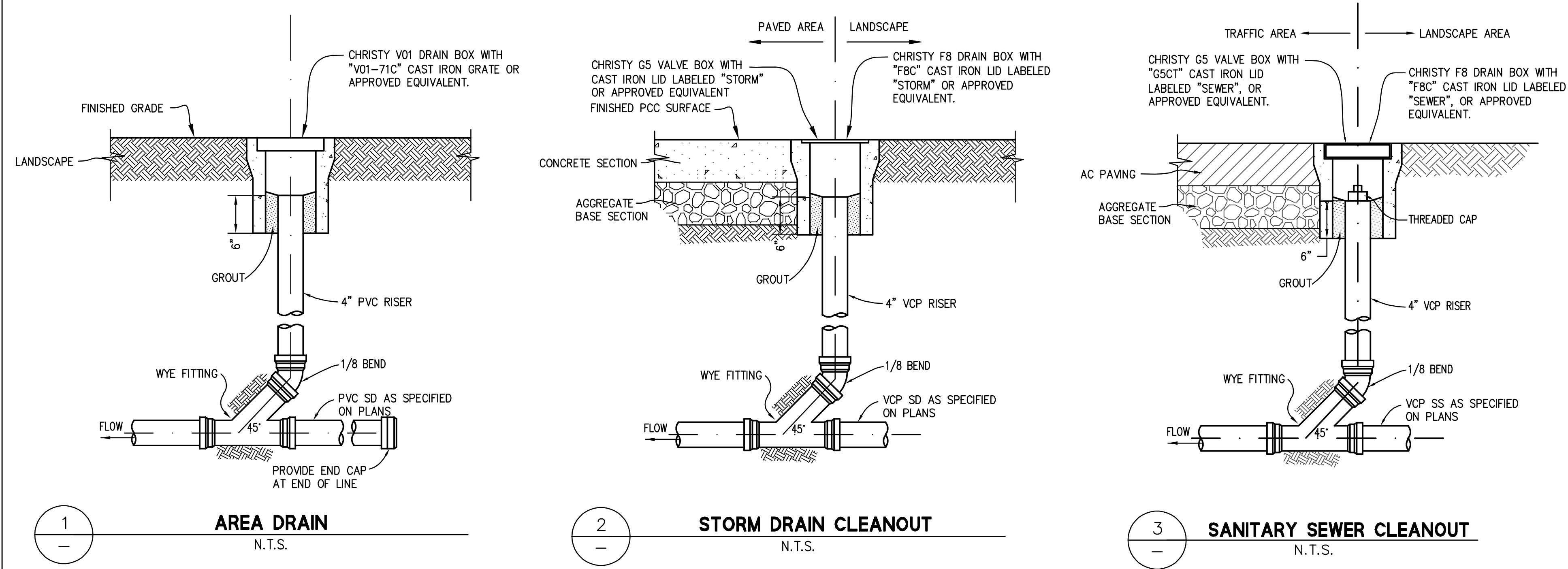
PLANNING DEPARTMENT SUBMITTAL

1027 PINE HOLLOW CT, CLAYTON  
CLAYTON COMMUNITY CHURCH  
04.02.2021

CONSTRUCTION DETAILS  
C-6  
SCALE NTS

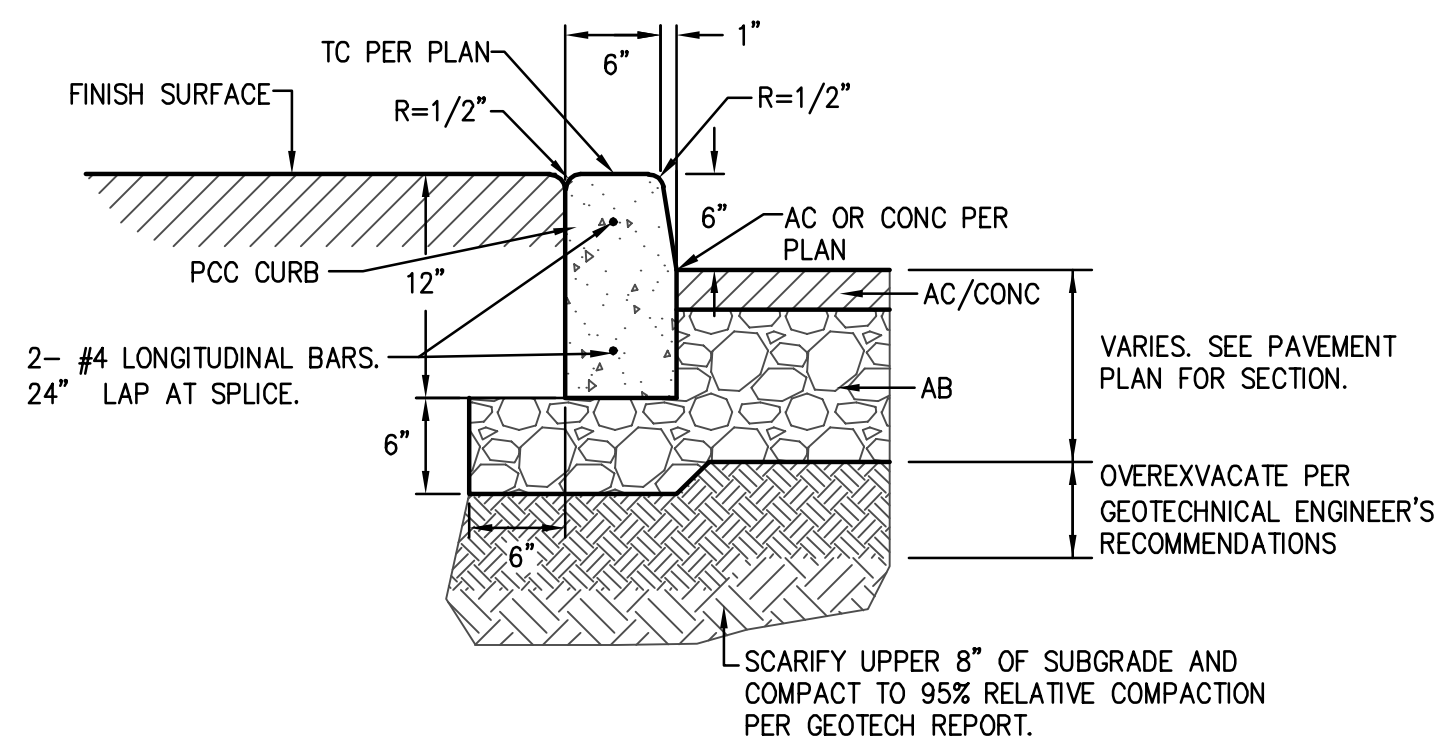


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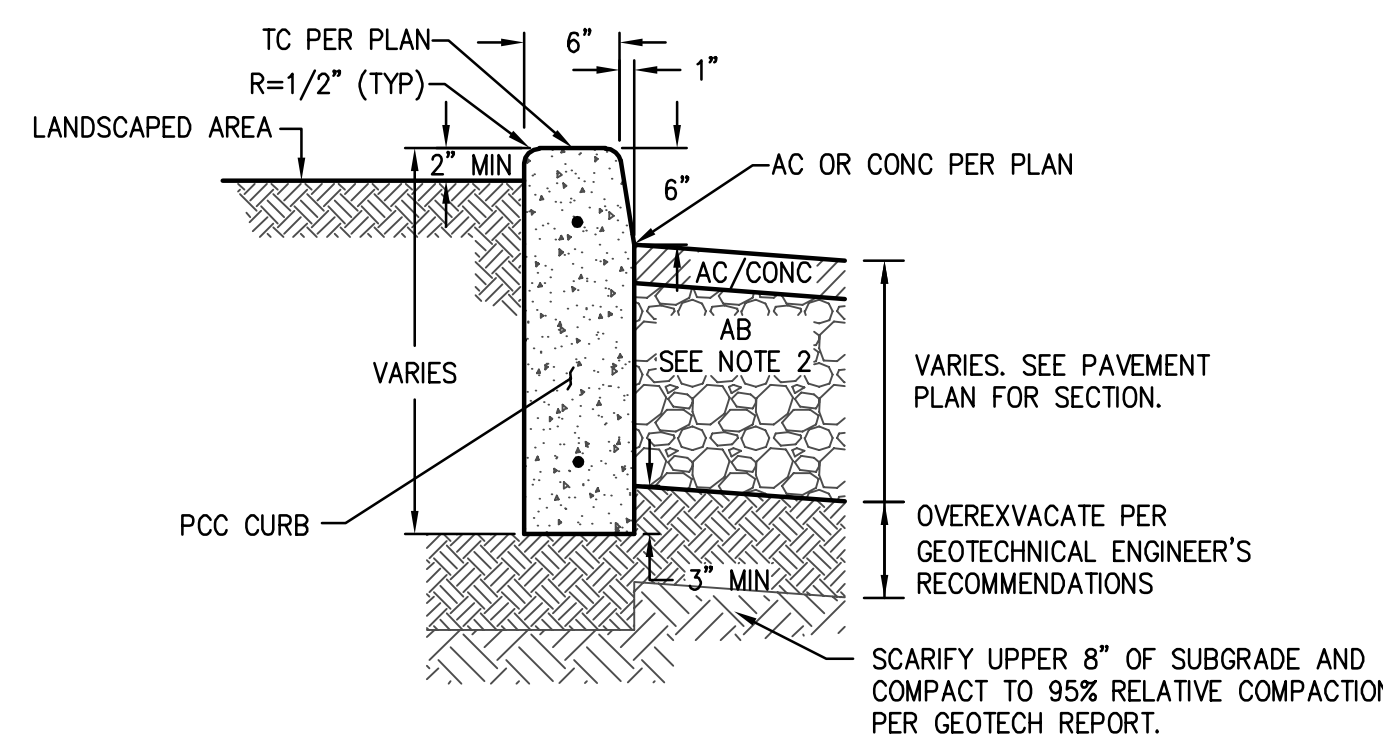
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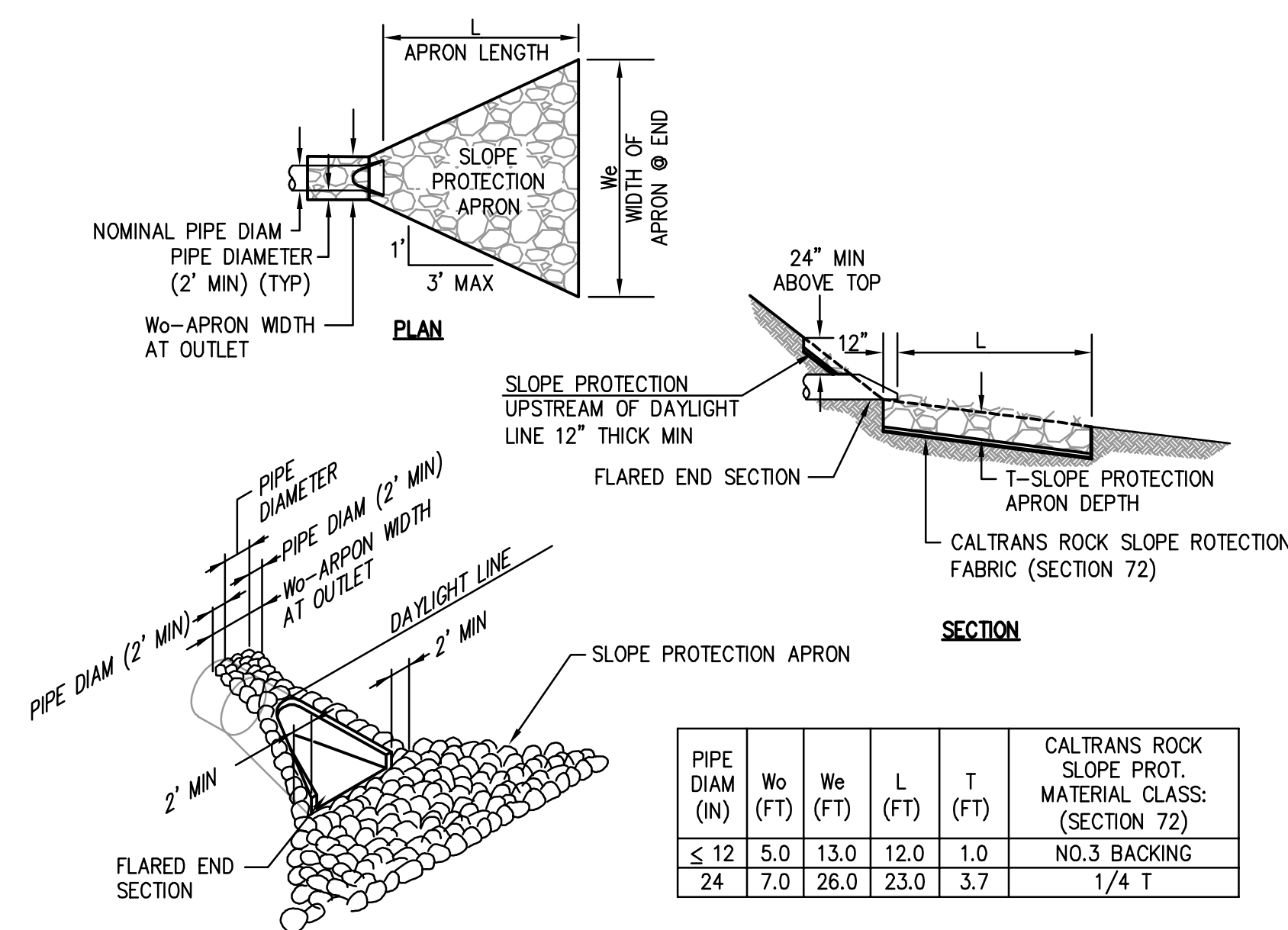
- NOTES:
1. CONC SHALL BE TYPE B, CLASS 2 PER CALTRANS STANDARD SPECIFICATION SECTION 90.
  2. CLASS 2 AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION.
  3. FILL MATERIAL SHALL MEET STANDARDS PER GEOTECHNICAL REPORT.
  4. EXPANSION JOINTS TO BE PLACED 20' OC MAX SPACING AND AT CURB RETURNS. CONTROL JOINTS SHALL BE PROVIDED BETWEEN EXPANSION JOINTS AT 10' MAX SPACING.
  5. REBAR LAP LENGTH AT 24" MIN (TYP).

1 VERTICAL CURB (TYPE 1)  
N.T.S.



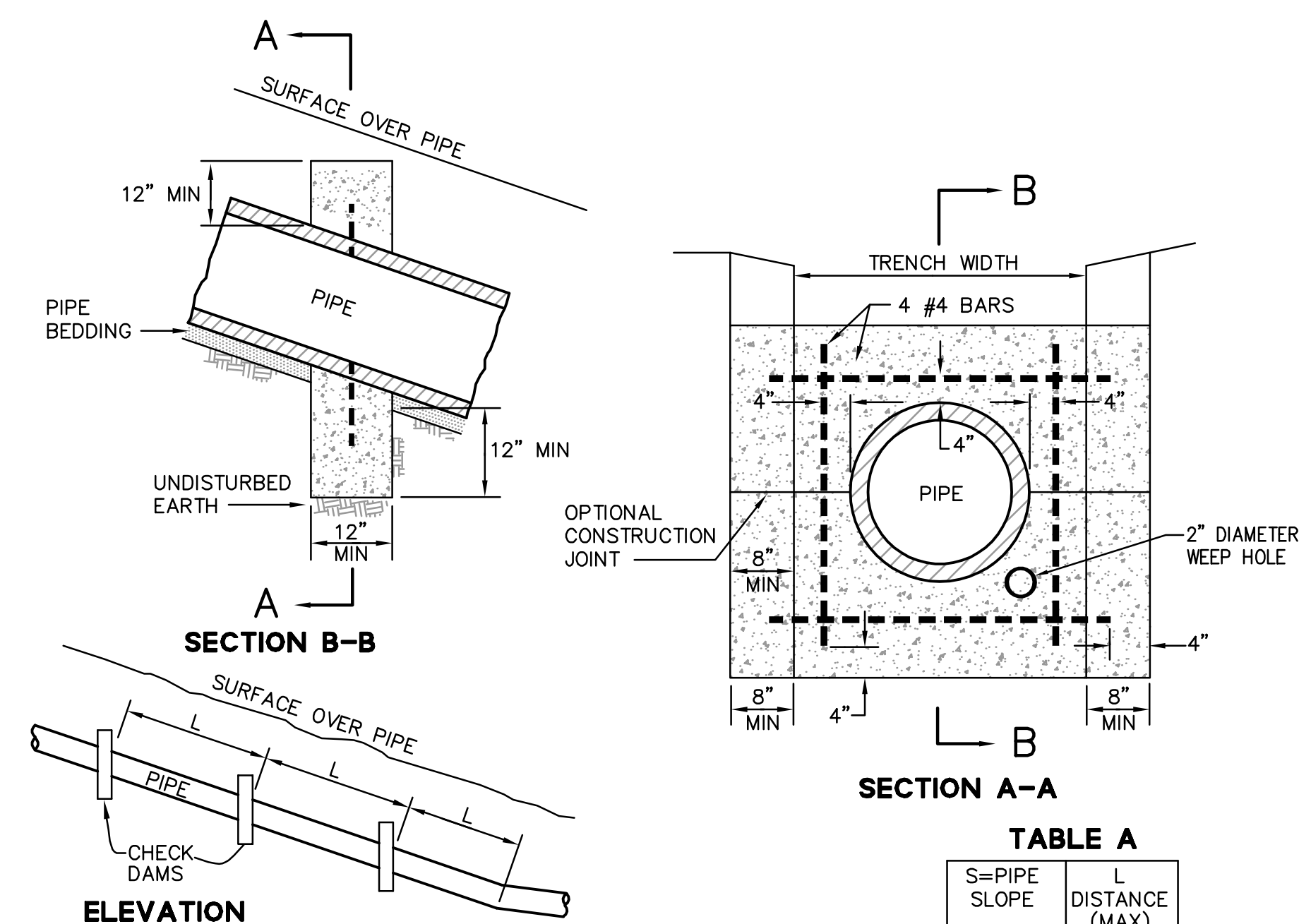
- NOTES:
1. CONC SHALL BE TYPE B, CLASS 2 PER CALTRANS STANDARD SPECIFICATION SECTION 90.
  2. CLASS 2 AGGREGATE BASE COMPACTED TO 95% RELATIVE COMPACTION.
  3. PROVIDE EXPANSION JOINTS 20' OC MAX SPACING. CONTROL JOINTS SHALL BE PROVIDED BETWEEN EXPANSION JOINTS AT 10' MAX SPACING.
  4. FILL MATERIAL SHALL MEET STANDARDS PER GEOTECHNICAL REPORT.
  5. CURBS SHOULD EXTEND A MIN OF 3" BEYOND THE BOTTOM OF THE PAVEMENT AND BASEROCK LAYER.
  6. REBAR LAP LENGTH AT 24" MIN (TYP).

2 VERTICAL CURB (TYPE 2)  
N.T.S.



PIPE DIAM (IN)	W <sub>o</sub> (FT)	W <sub>e</sub> (FT)	L (FT)	T (FT)	CALTRANS ROCK SLOPE PROT. MATERIAL CLASS: (SECTION 72)
≤ 12	5.0	13.0	12.0	1.0	NO.3 BACKING
24	7.0	26.0	23.0	3.7	1/4 T

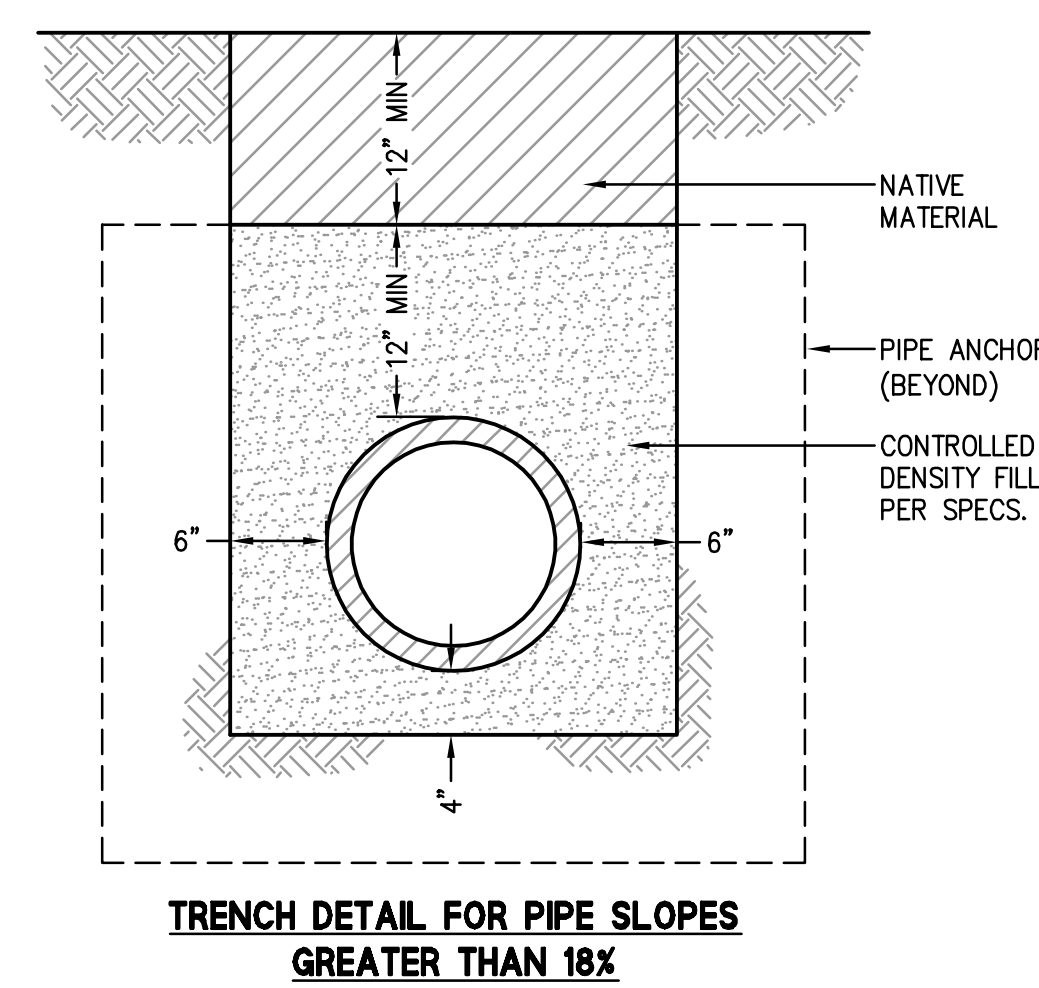
3 STORM DRAIN OUTFALL W/ FLARED END SECTION  
NTS



- NOTES:
1. INSTALL CHECK DAMS ON ALL STORM DRAIN PIPES WITH A SLOPE GREATER THAN OR EQUAL TO 0.17.
  2. SPACING OF DAMS FOR PIPE SLOPES BETWEEN VALUES SHOWN IN TABLE "A" MAY BE PROPORTIONED.

S=PIPE SLOPE	L DISTANCE (MAX)
1.0	12'
0.67	14'
0.50	16'
0.40	18'
0.17-0.33	20'

4 CONCRETE PIPE ANCHORS/CHECK DAMS  
N.T.S.



Drawing is only to scale when printed at 24"x36"