

PROPOSED CIVIL DESIGN CONSTRUCTION PLANS
TO SERVE

THE HEIGHTS AT HARTFORD

5233 HARTFORD STREET
ABILENE, TX 79605

JULY 2025



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REVISIONS

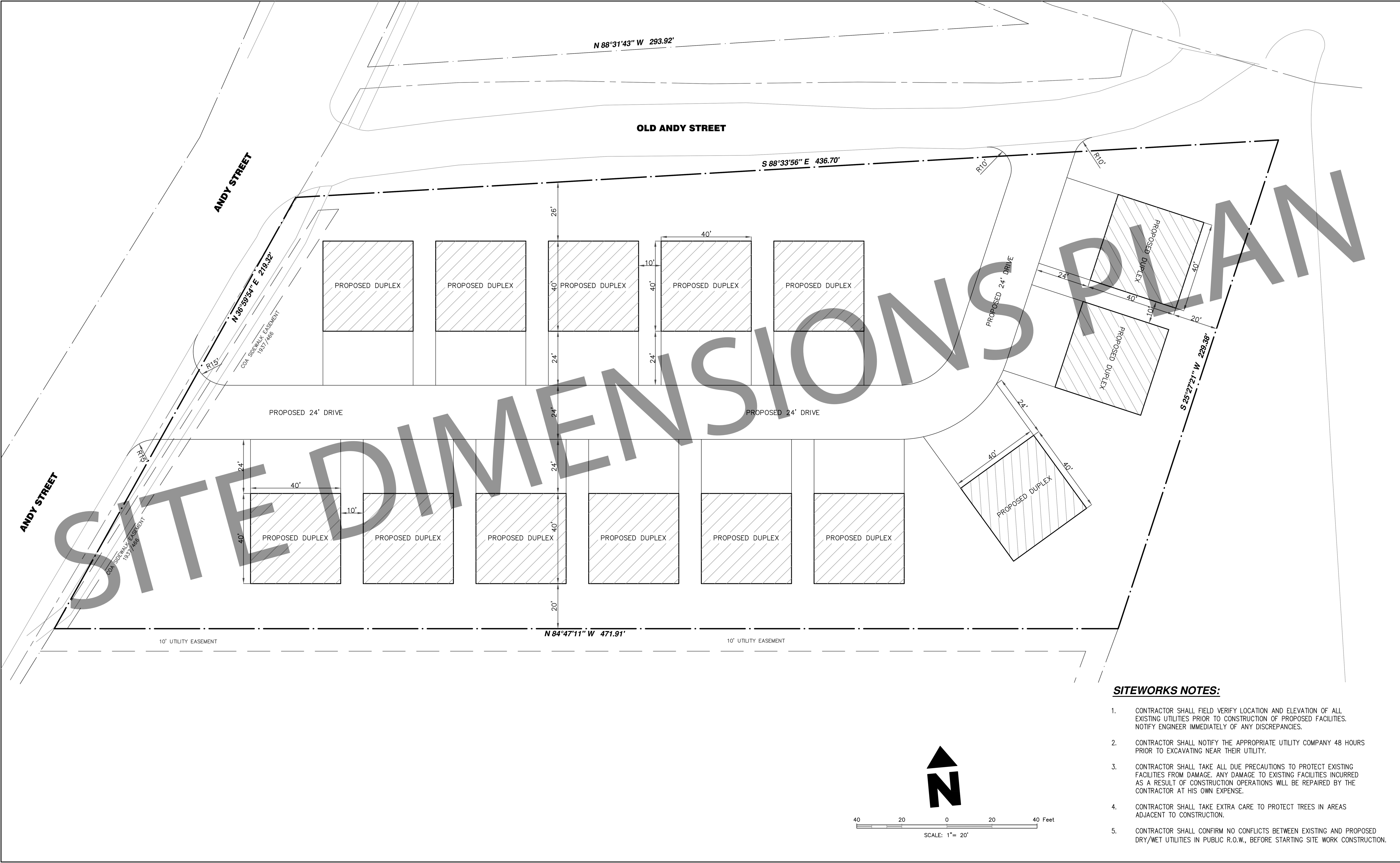
THE HEIGHTS
AT HARTFORD

5233 HARTFORD
STREET
ABILENE, TX 79605

COVER SHEET

DRAWING NO.:

C1

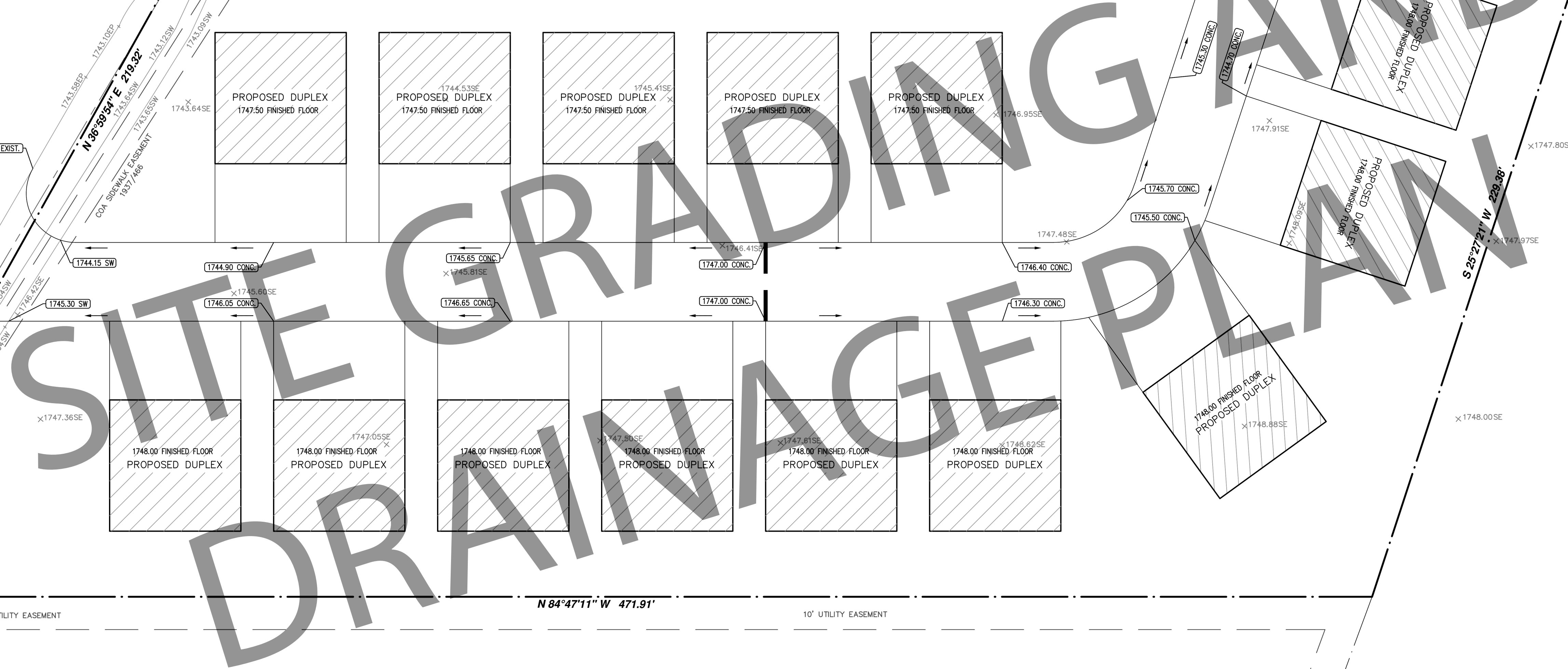


SITEWORKS NOTES:

- CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION OF PROPOSED FACILITIES. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
- CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANY 48 HOURS PRIOR TO EXCAVATING NEAR THEIR UTILITY.
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- CONTRACTOR SHALL TAKE EXTRA CARE TO PROTECT TREES IN AREAS ADJACENT TO CONSTRUCTION.
- CONTRACTOR SHALL CONFIRM NO CONFLICTS BETWEEN EXISTING AND PROPOSED DRY/WET UTILITIES IN PUBLIC R.O.W., BEFORE STARTING SITE WORK CONSTRUCTION.

SITE DIMENSIONS PLAN	DRAWING NO.:	
	DATE:	DRAWN BY:
5233 HARTFORD STREET ABILENE, TX 79605	DWG SCALE:	CHECKED BY:
	PROJECT NO.:	APPROVED BY:
THE HEIGHTS AT HARTFORD	REVISIONS	
	NO.	DATE

C2



1. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION OF PROPOSED FACILITIES. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
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FF XX.XX
CONC. XX.XX

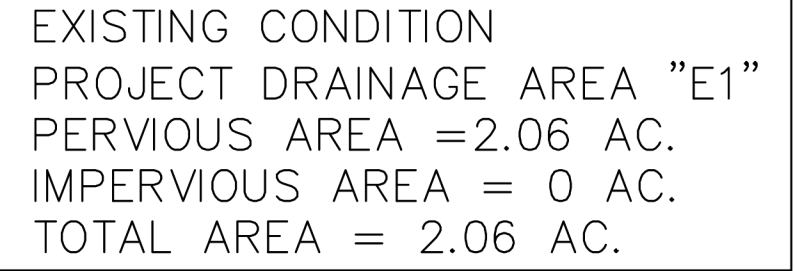
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ABILENE, TX 79605**

DATE:	DRAWN BY:
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C3



REVISIONS	NO	DATE

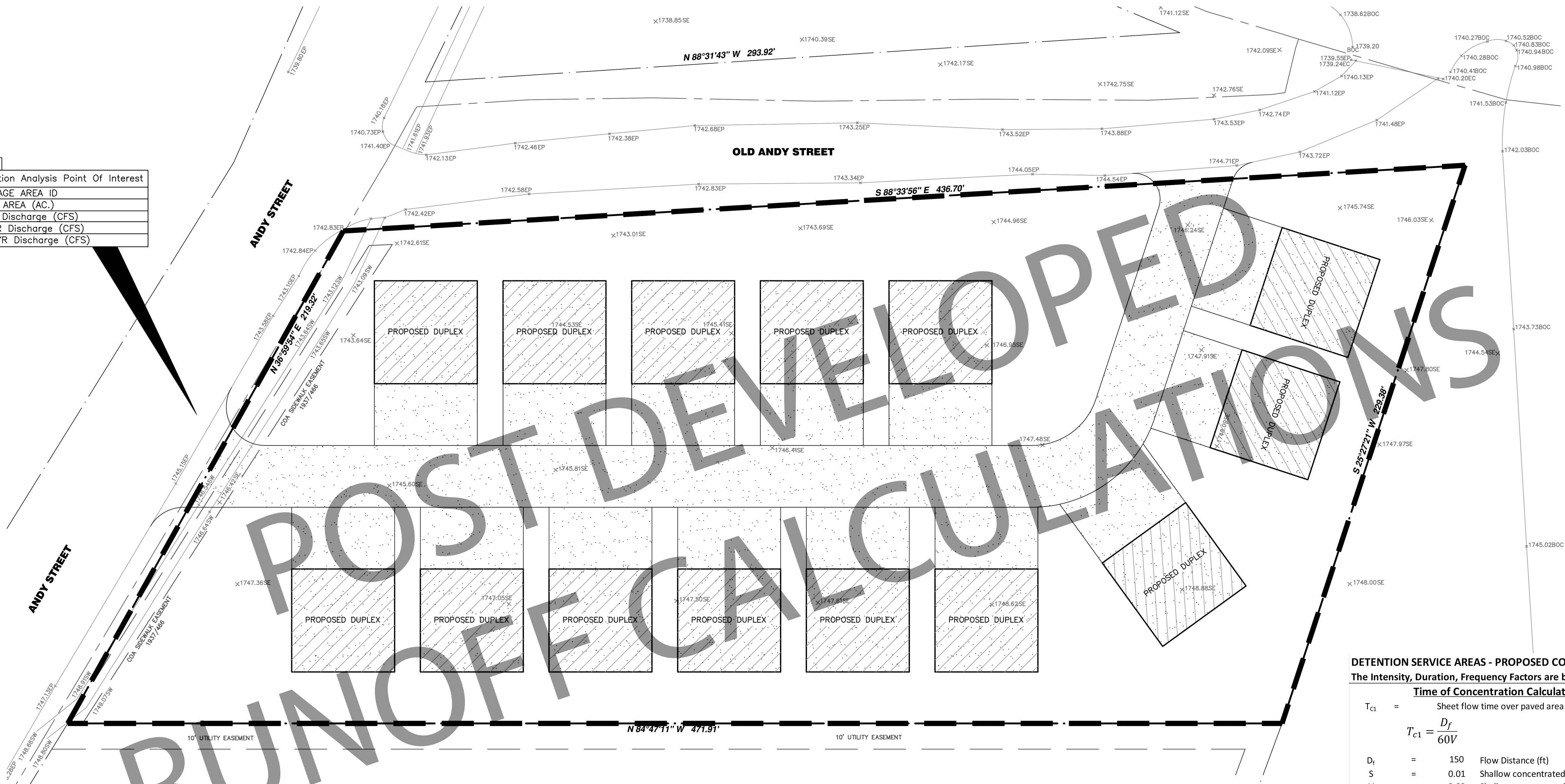
THE HEIGHTS AT HARTFORD

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PRE DEVELOPED HYDROGRAPH CALCULATIONS	DATE:	DRAWN BY:
	DWG SCALE:	CHECKED BY:
	PROJECT NO:	
	APPROVED BY:	

DRAWING NO.: C4

Drainage Area	
Proposed Condition Analysis Point Of Interest	
P	DRAINAGE AREA ID
2.06	TOTAL AREA (AC.)
5.84	2-YR Discharge (CFS)
8.51	10-YR Discharge (CFS)
12.51	100-YR Discharge (CFS)

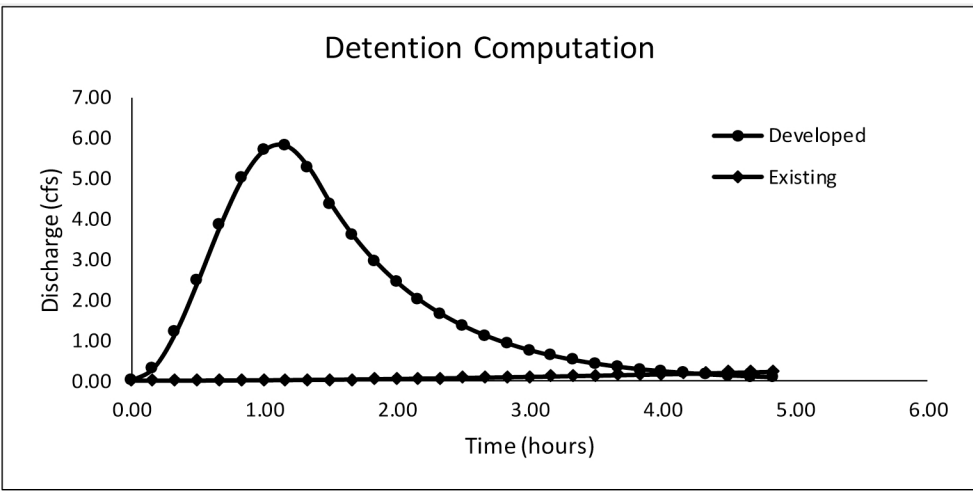


DETENTION SERVICE AREAS - PROPOSED CONDITION PEAK RUNOFF CALCULATIONS
The Intensity, Duration, Frequency Factors are based on NOAA Atlas 14

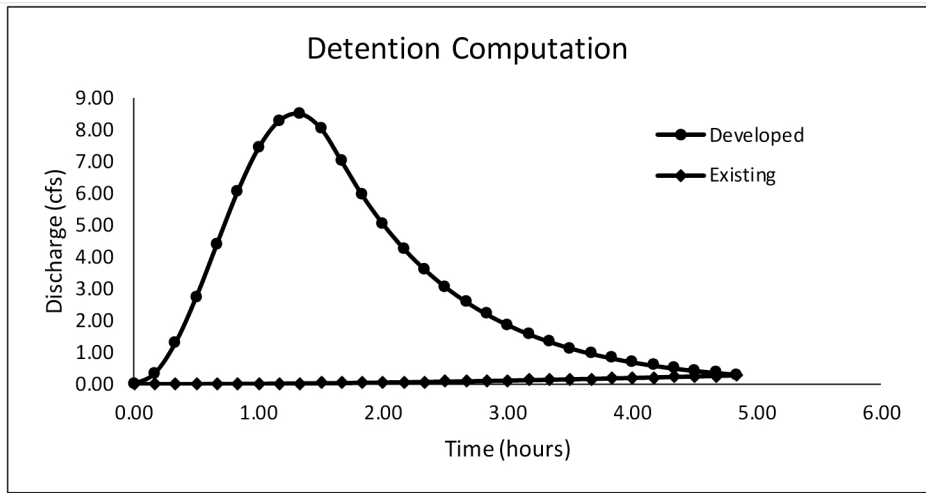
Time of Concentration Calculations		Peak Runoff Calculations	
T_{c1}	= Sheet flow time over paved area	T_c	= 10 minutes
$T_{c1} = \frac{D_f}{60V}$		A	= 2.06 acre
		Cw	= 0.65
		Q	= C x I x A
D_f	= 150 Flow Distance (ft)	2-Yr IDF	
S	= 0.01 Shallow concentrated slope (ft/ft)	b	= 49.64
V	= 2.03 Shallow concentrated flow velocity (ft/s)	d	= 10.21
T_{c2}	= 1.23 minutes	e	= 0.81
		I(2-Yr)	= 4.37
		Q(2-Yr)	= 5.84 cfs
		10-Yr IDF	
T_c	= 1.23 minutes	b	= 70.75
T_c used	= 10 minutes	d	= 10.34
		e	= 0.80
		I(10-Yr)	= 6.36
		Q(10-Yr)	= 8.51 cfs
		100-Yr IDF	
		b	= 100.12
		d	= 10.84
		e	= 0.78
		I(100-Yr)	= 9.35
		Q(100-Yr)	= 12.51 cfs

Cw Calculations			
Total Area	=	2.06	acre
Pervious Area	=	0.94	acre
Impervious Area	=	1.12	acre
C	=	0.9	(impervious)
C	=	0.35	(pervious)
Cw = Weighted Runoff Coefficient			
Cw	=	0.65	
Percent Impervious	=	54	%

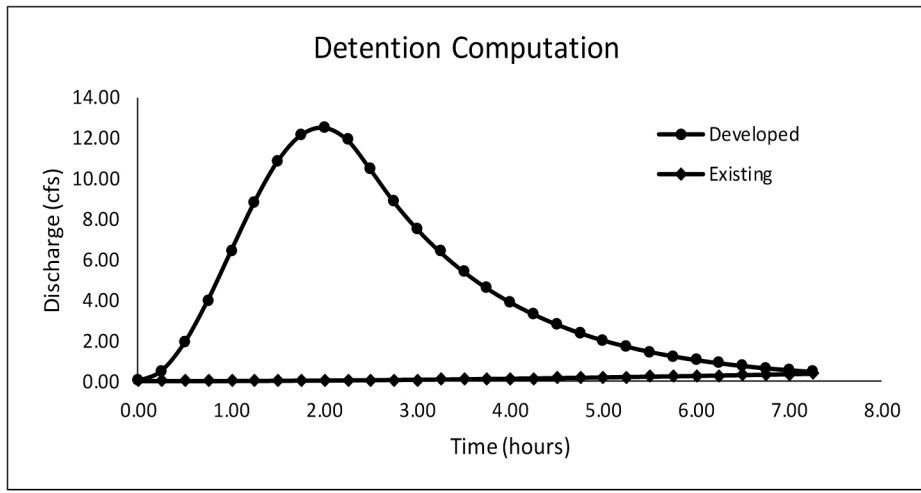
2-Yr Required Detention Analysis			
Small Watershed Method of Hydrograph Development			
Method by H.R. Malcom			
V	Excess Runoff volume (inches)	4.60	inches
A	Total Area contributing to runoff (acres)	2.06	acres
Qp	Peak Developed Discharge (cfs)	5.84	cfs
Tincr	Time Increment (minutes)	10	minutes
Qun	Peak Undeveloped Discharge (cfs)	0.57	cfs
Tp	Time to Peak	=	3991 seconds
Volume	Required Storage Volume	=	0.71 acre-ft



10-Yr Required Detention Analysis			
Small Watershed Method of Hydrograph Development			
Method by H.R. Malcom			
V	Excess Runoff volume (inches)	7.70	inches
A	Total Area contributing to runoff (acres)	2.06	acres
Qp	Peak Developed Discharge (cfs)	8.51	cfs
Tincr	Time Increment (minutes)	10	minutes
Qun	Peak Undeveloped Discharge (cfs)	0.83	cfs
Tp	Time to Peak	=	4697 seconds
Volume	Required Storage Volume	=	1.22 acre-ft



100-Yr Required Detention Analysis			
Small Watershed Method of Hydrograph Development			
Method by H.R. Malcom			
V	Excess Runoff volume (inches)	16.78	inches
A	Total Area contributing to runoff (acres)	2.06	acres
Qp	Peak Developed Discharge (cfs)	12.51	cfs
Tincr	Time Increment (minutes)	15	minutes
Qun	Peak Undeveloped Discharge (cfs)	1.24	cfs
Tp	Time to Peak	=	7099 seconds
Volume	Required Storage Volume	=	2.71 acre-ft



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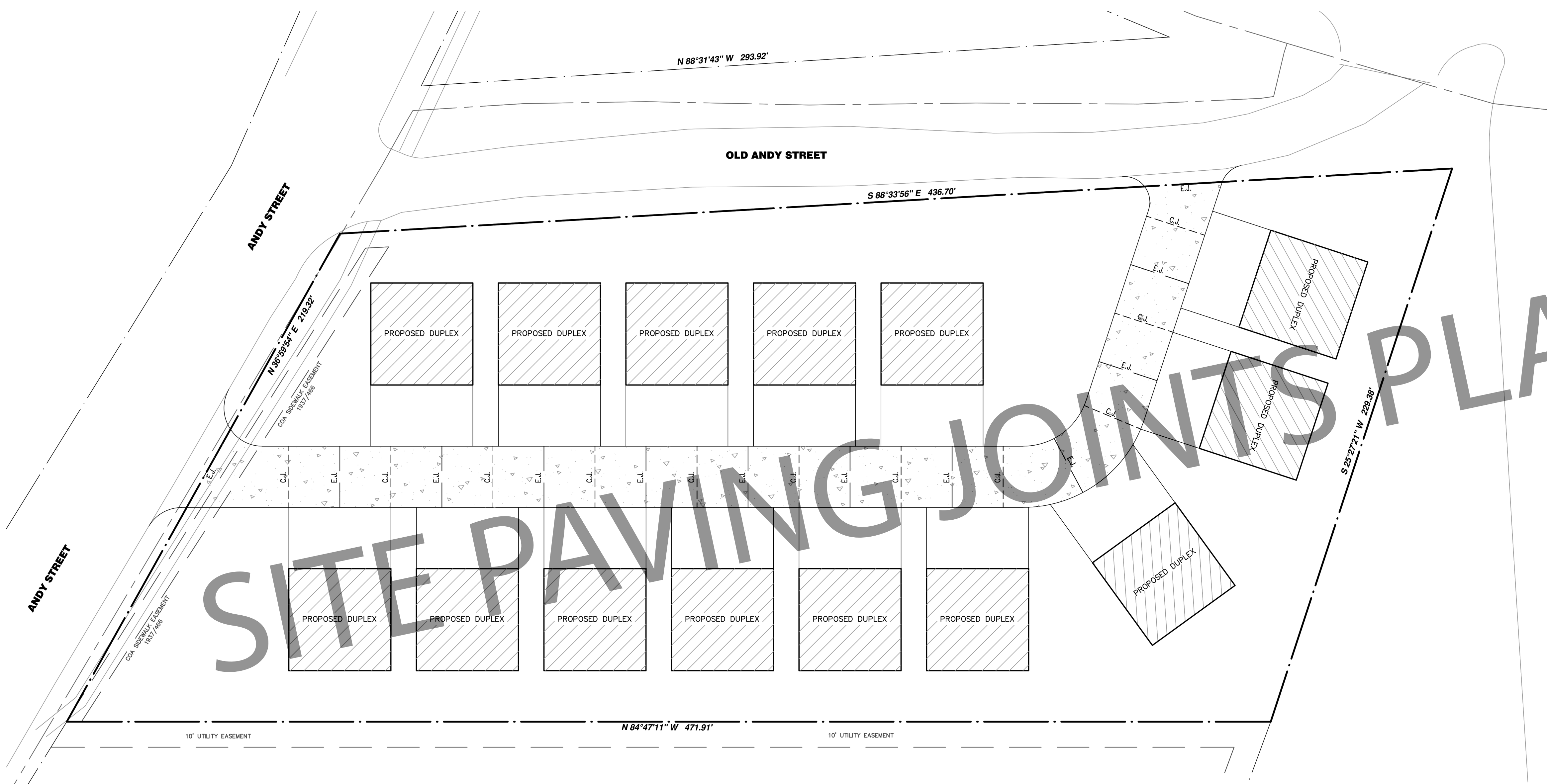
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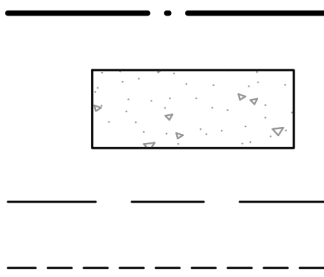
POST DEVELOPED
HYDROGRAPH
CALCULATIONS

DRAWING NO.:

C5



LEGEND

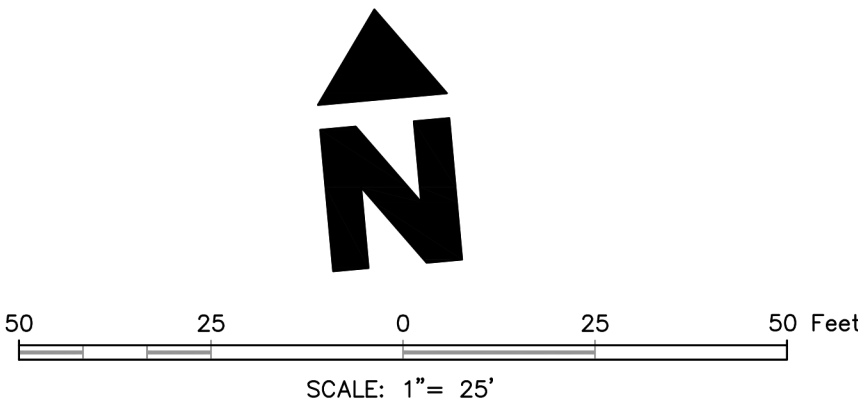
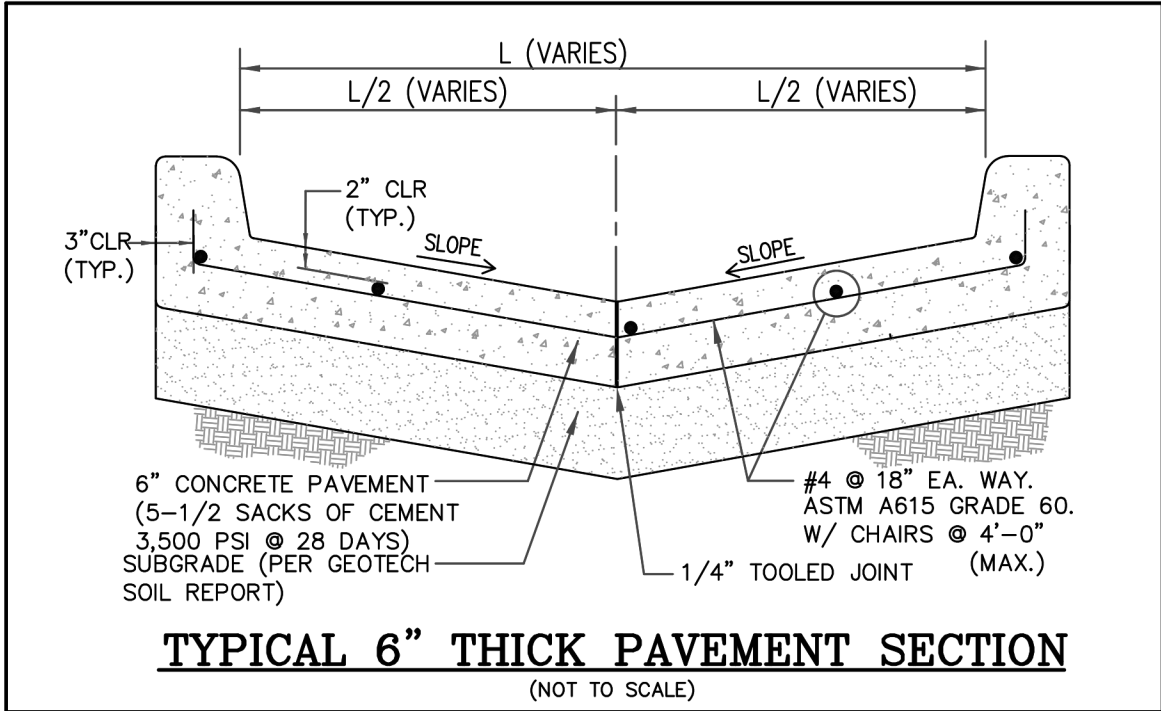
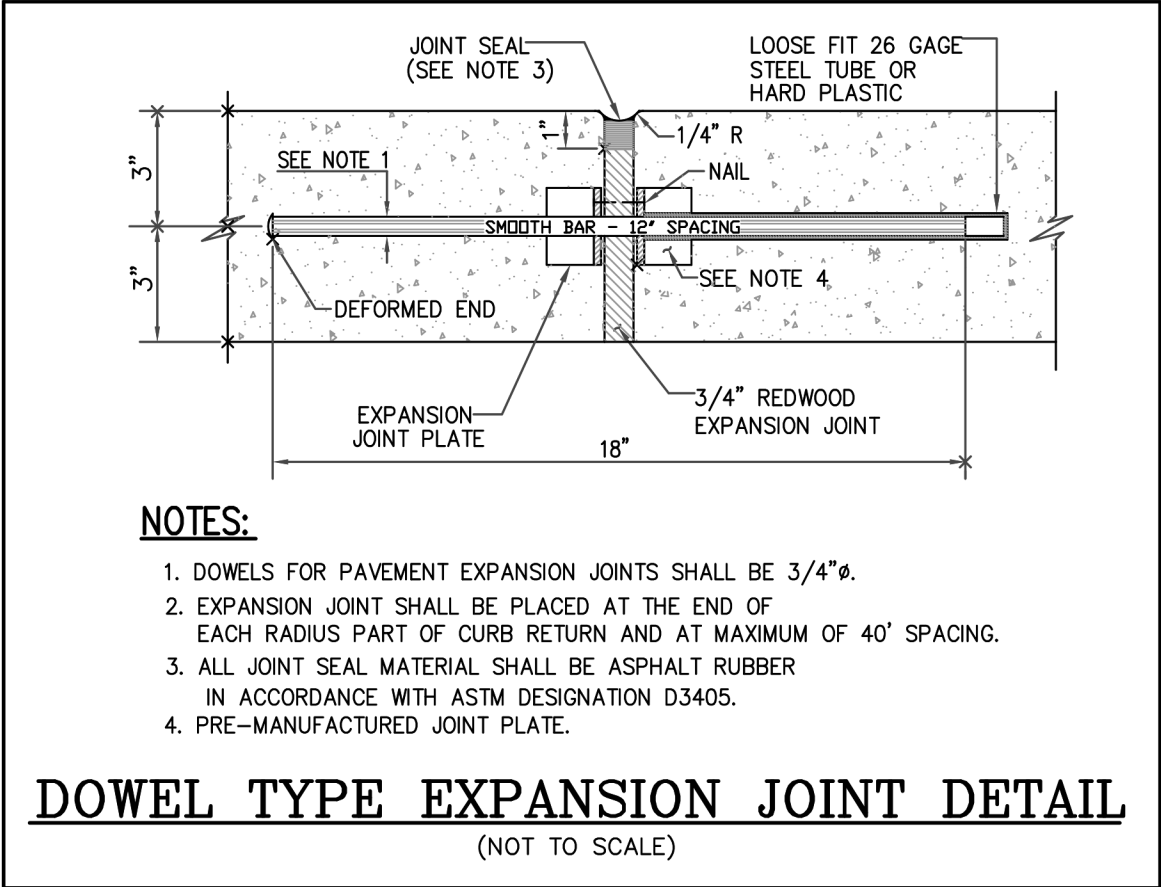
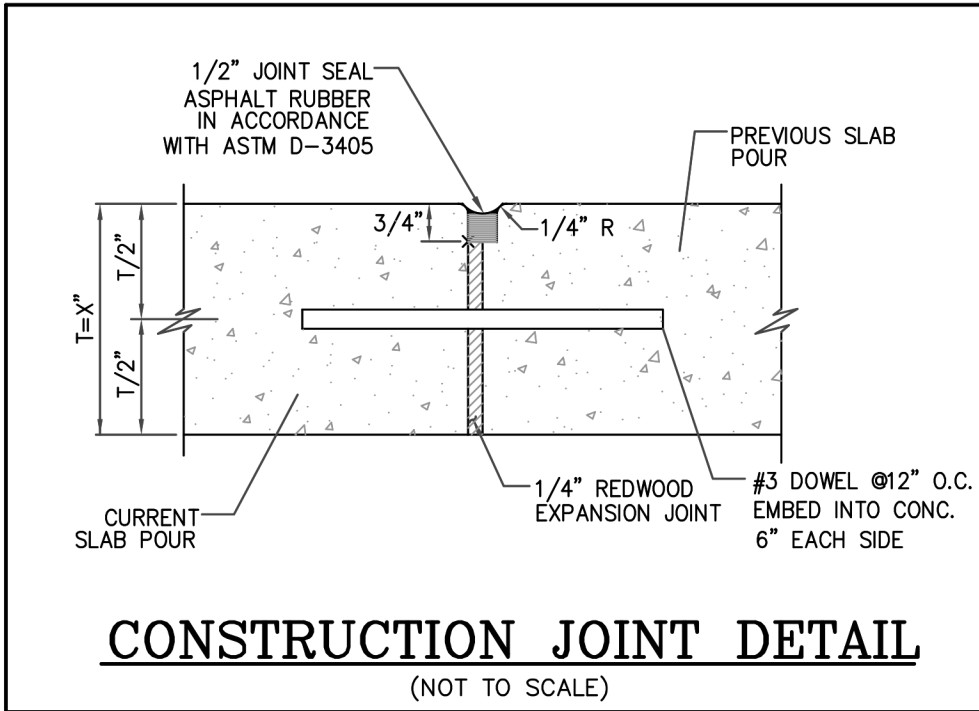


PROPERTY LINE

PROPOSED 6" THICK CONCRETE PAVEMENT
(RE: DETAIL ON THIS SHEET)

EXPANSION JOINT (E.J.)

CONSTRUCTION JOINT (C.J.)



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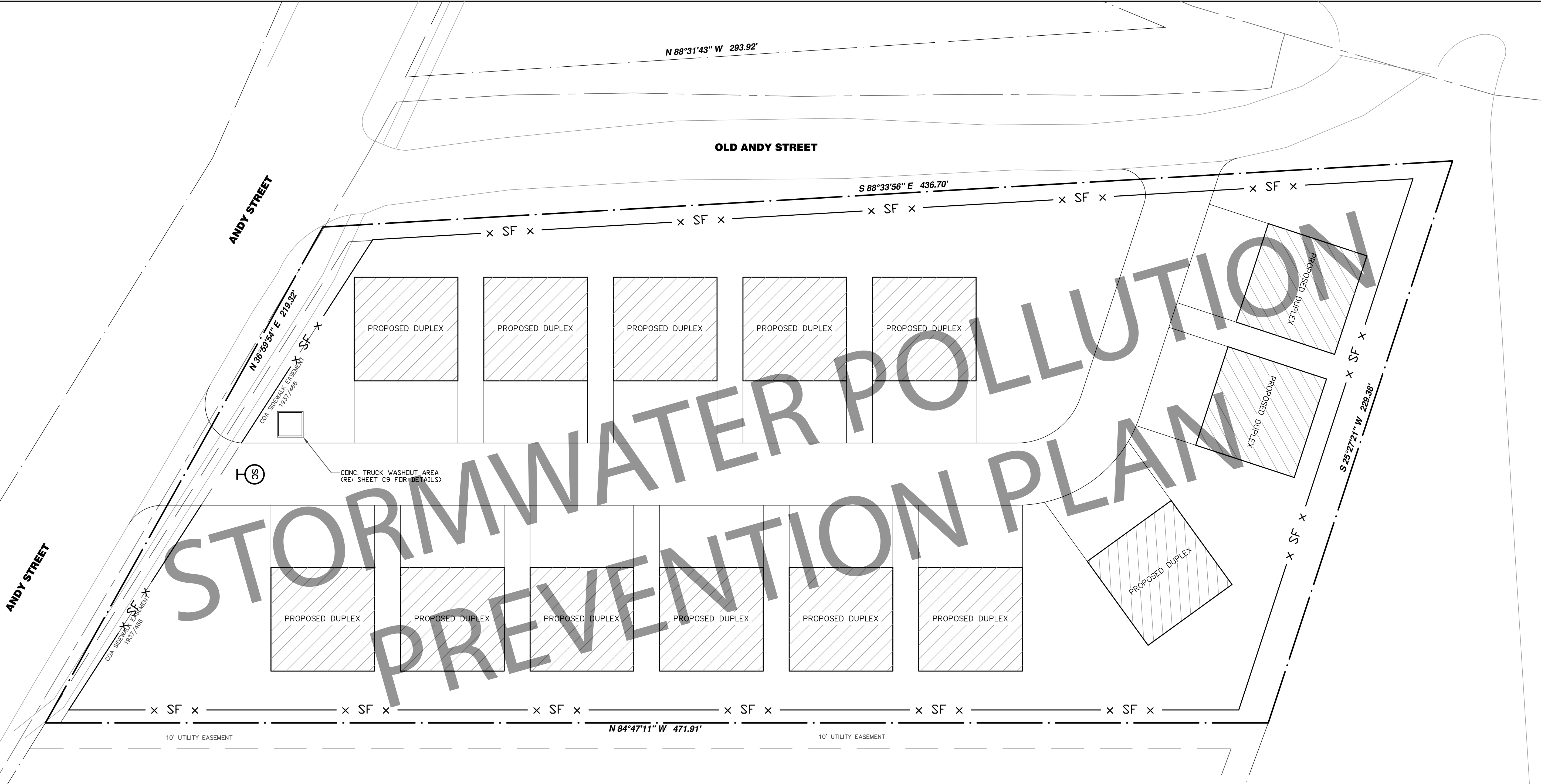
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SITE PAVING
JOINTS PLAN

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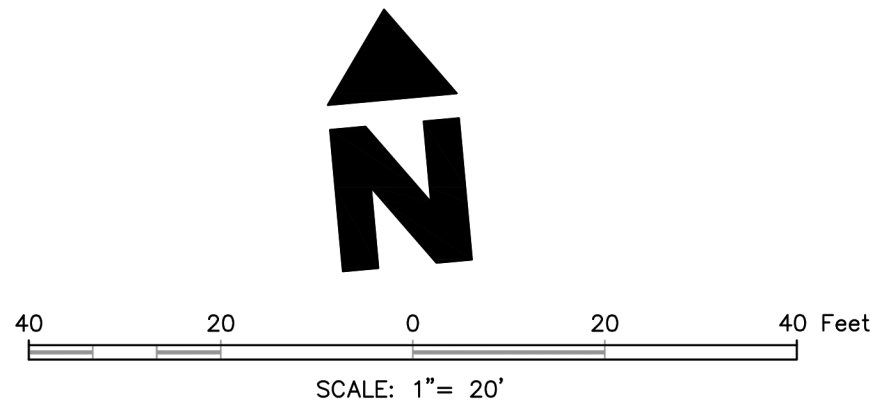


LEGEND

- PROPERTY LINE
- SILT FENCE
- STABILIZED CONSTRUCTION ACCESS

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STORMWATER
POLLUTION
PREVENTION PLAN

DRAWN BY:
DATE:
DWG SCALE:

CHECKED BY:
PROJECT NO:
APPROVED BY:

DRAWING NO.:
C7

STORM WATER POLLUTION PREVENTION NOTES

SEDIMENT WILL BE RETAINED ON SITE TO THE MAXIMUM EXTENT PRACTICABLE.

CONTROL MEASURE WILL BE PROPERLY SELECTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS AND GOOD ENGINEERING PRACTICE. IF DAMAGED OR RENDERED INEFFECTIVE, THE EROSION AND SEDIMENT CONTROLS WILL BE REPAIRED OR REPLACED IMMEDIATELY.

WHEN PUMPING (DEWATERING) STANDING STORM WATER FROM THE SITE, THE OPERATOR SHALL USE APPROPRIATE BEST MANAGEMENT PRACTICES (BMP'S) FROM THE STORM WATER MANAGEMENT HANDBOOK FOR CONSTRUCTION ACTIVITIES THAT ADDRESS DEWATERING ACTIVITIES. UNTREATED/DIRECT DISCHARGE INTO A STORMSEWER WILL NOT BE ALLOWED.

IF THE INTERIM PERIOD BETWEEN CONSTRUCTION OF UTILITIES AND STREET CONSTRUCTION WILL BE MORE THEN 21 DAYS, THE STREET RIGHT-OF-WAY WILL BE MULCHED OR OTHERWISE STABILIZED WITHIN THE 14 DAYS.

AFTER PAVING COMPLETION, NEWLY GRADED AREAS AND ALL EXPOSED SOILS WILL BE COMPLETELY STABILIZED.

CONTROL MEASURES WILL BE INSTALLED ALONG BACK OF CURB TO ADEQUATELY PREVENT SEDIMENT RUNOFF INTO STREETS ONCE PAVING COMPLETE.

CONCRETE TRUCKS WILL NOT BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ON THE SITE, UNLESS THEY ARE USING A PROPERLY DESIGNED AND DESIGNATED CONCRETE WASHOUT AREA.

EROSION AND SEDIMENT CONTROL MEASURES THAT HAVE BEEN IMPROPERLY INSTALLED OR HAVE BEEN DISABLED, RUN-OVER, REMOVED, OR OTHERWISE RENDERED INEFFECTIVE MUST BE REPLACED OR CORRECTED IMMEDIATELY.

MAINTENANCE AND REPAIRS WILL BE CONDUCTED WITHIN 24 HOURS OF INSPECTION REPORT.

SEDIMENT WILL BE REMOVED FROM BEHIND THE FILTER FABRIC FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE.

SEDIMENT WILL BE REMOVED AROUND THE INLET BARRIERS AND DIKES WHEN THE STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED.

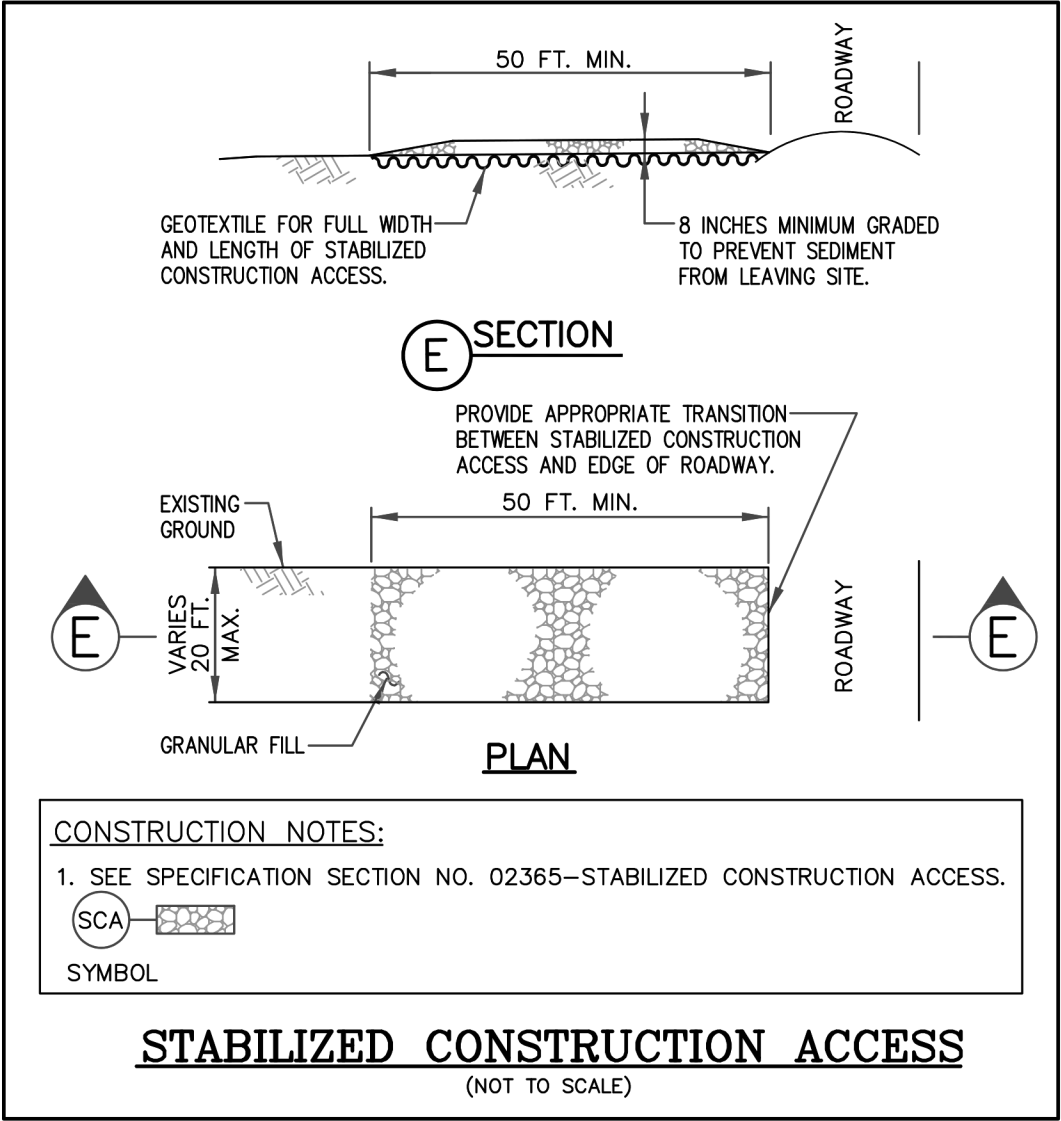
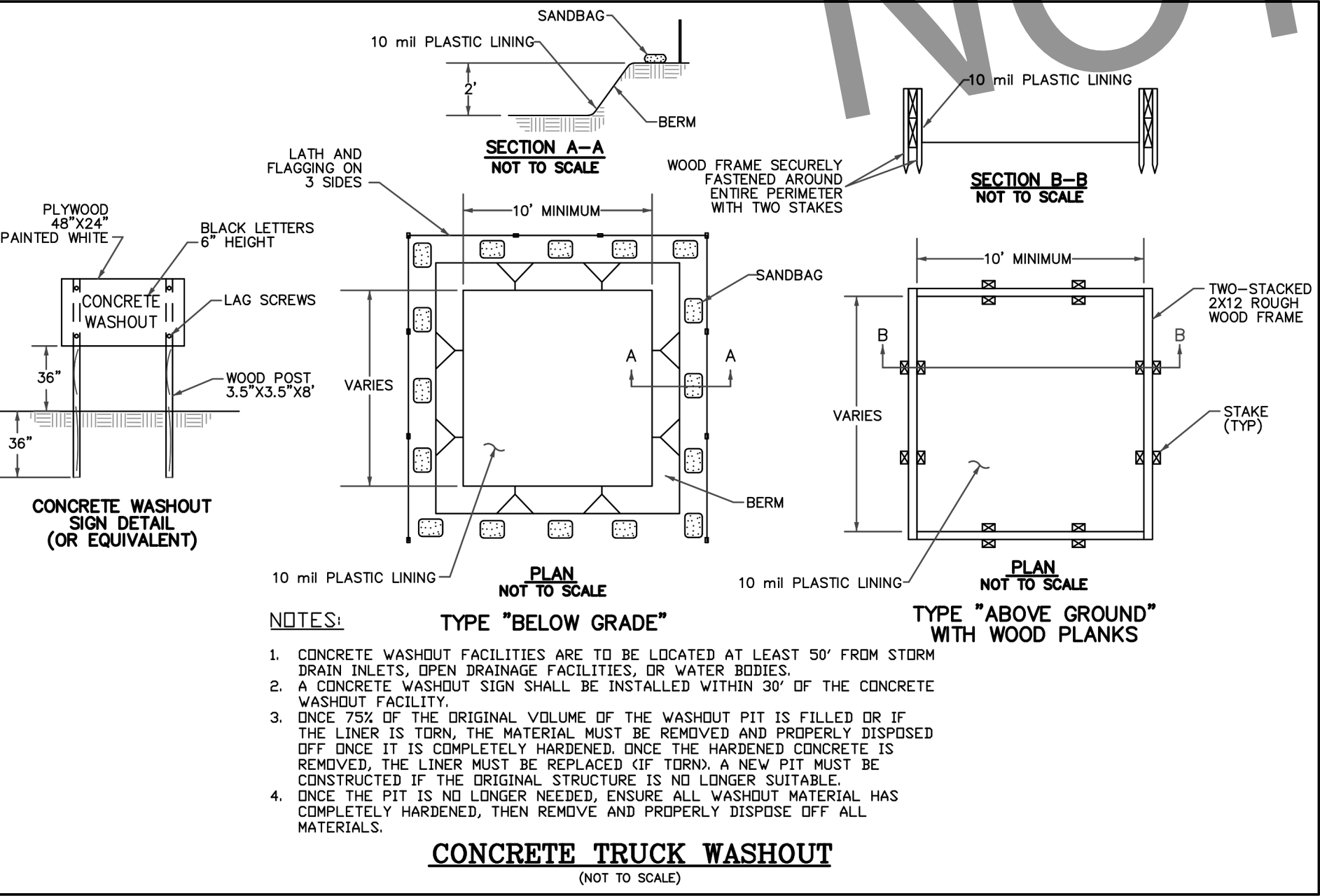
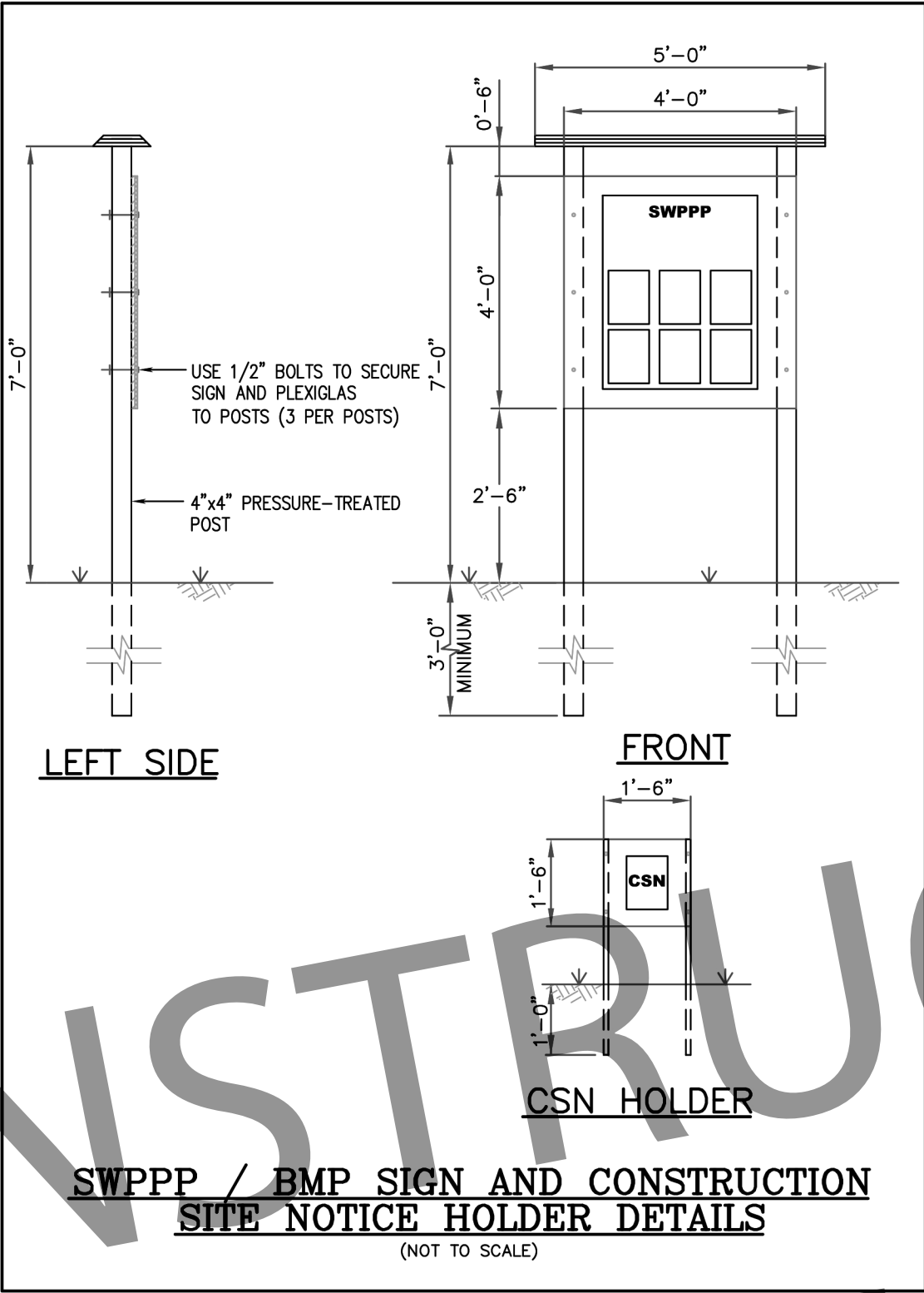
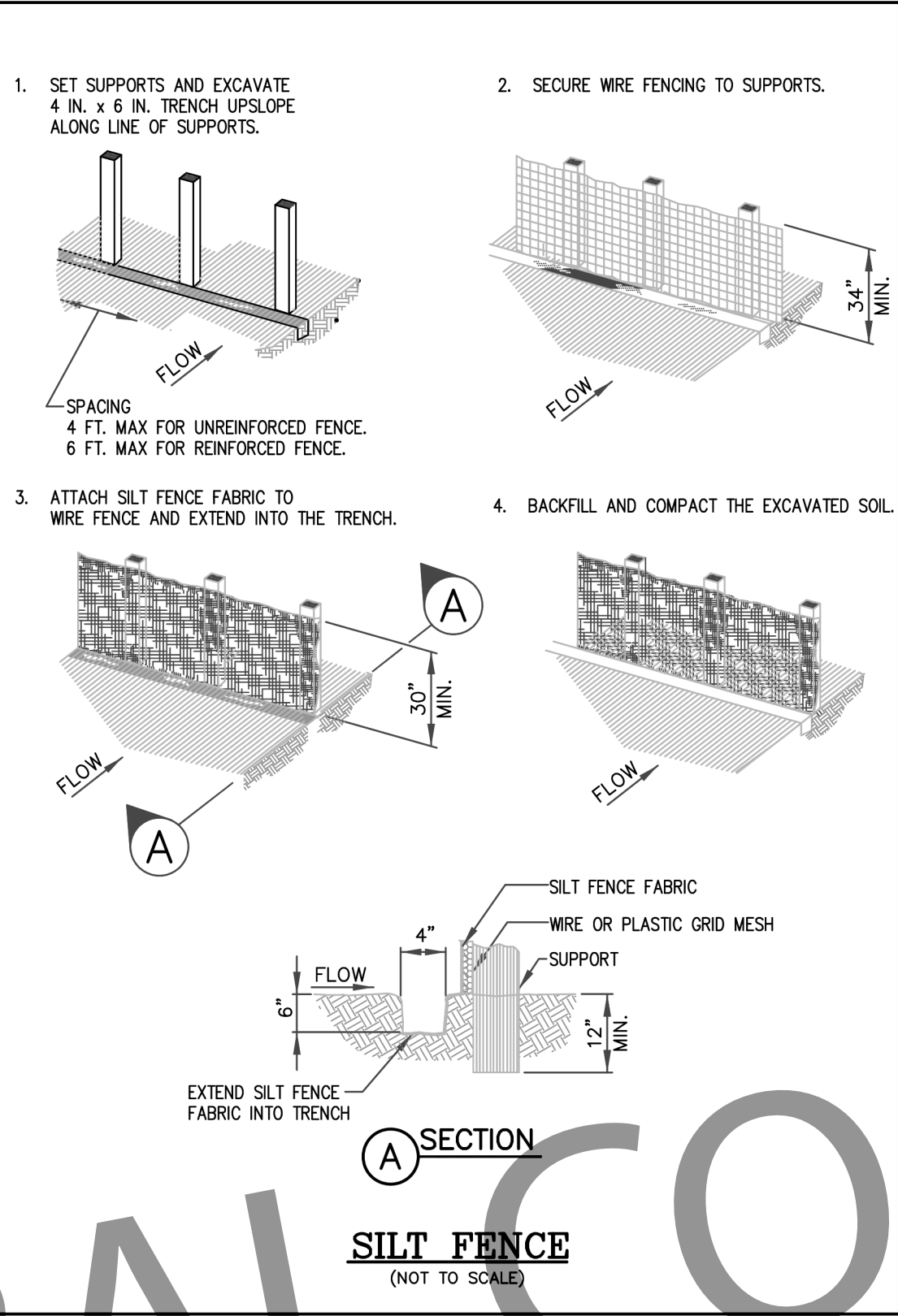
INSPECTIONS OF ALL BMP'S WILL BE CONDUCTED EVERY FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER; OR EVERY 7 CALENDAR DAYS.

EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLANS WILL BE INSPECTED TO INSURE EFFECTIVE OPERATION.

THE SWPPP WILL BE AMENDED TO REPLACE INEFFECTIVE BMPS IDENTIFIED THROUGH INSPECTIONS WITHIN 7 DAYS OF IDENTIFYING THE DEFICIENCY.

REPORTS WILL INCLUDE WHAT MAINTENANCE WAS DONE AS A RESULT OF THE INSPECTION.

ALL LITTER, TRASH AND FLOATABLE DEBRIS WILL BE CONTAINED WITHIN THE SITE.



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GENERAL
CONSTRUCTION
NOTES AND DETAILS

DRAWING NO.:

C8