

HUBBARD ENGINEERING GENERAL NOTES

- THE PLANS PREPARED FOR THIS PROJECT PRESENT A DESCRIPTION OF THE WORK TO BE ACCOMPLISHED. THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND DETERMINE, FROM HIS OWN INSPECTION, THE CONDITIONS UNDER WHICH IT IS TO BE PERFORMED. THE CONTRACTOR, BY MAKING HIS BID, REPRESENTS THAT HE HAS VISITED THE SITE AND FAMILIARIZED HIMSELF WITH LOCAL CONDITIONS, THE TYPE OF WORK TO BE PERFORMED, EVALUATED THE DIFFICULTY OF PERFORMING THE REQUIRED TASKS, AND THE LABOR, EQUIPMENT AND MATERIAL THAT ARE REQUIRED TO PROVIDE A COMPLETE PROJECT.
- A THOROUGH ATTEMPT HAS BEEN MADE TO SHOW THE LOCATIONS OF ALL UNDERGROUND OBSTRUCTIONS AND UTILITY LINES IN THE WORK AREA; HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO OBSTRUCTIONS AND UTILITY LINES ENCOUNTERED DURING CONSTRUCTION AND SHALL DETERMINE THE EXACT LOCATION OF SAID UTILITIES IN ADVANCE OF TRENCHING. THE ENGINEER WILL NOT GUARANTEE ANY ELEVATIONS OR LOCATIONS OF EXISTING UNDER-GROUND UTILITIES SHOWN ON THESE PLANS.
- MYLAR PLAN SHEETS FOR AS-BUILTS MAY BE PURCHASED FROM HUBBARD ENGINEERING. THE COST OF THIS ITEM SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
- ALL HANDICAP ACCESS RAMPS, PARKING STALLS, AND DELINEATED WALKWAYS SHALL BE CONSTRUCTED AND MARKED IN ACCORDANCE WITH CURRENT FEDERAL AND/OR LOCAL A.D.A. STANDARDS AND REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL AUTHORITIES PRIOR TO CONSTRUCTING AND/OR STRIPING TO CONFIRM CURRENT REQUIREMENTS. SLOPES WITHIN THE LIMITS OF HANDICAPPED PARKING SPACES SHALL NOT EXCEED 2% IN ANY DIRECTION.
- ALL SLOPES HIGHER THAN ONE (1) FOOT AND STEEPER THAN 20:1, UNLESS LINED WITH TURF, SHALL BE COMPACTED AND TESTED PER MAG SPECIFICATION 215. WE RECOMMEND RE-COMPACTATION PER MAG SPECIFICATION 215 AFTER INSTALLATION OF IRRIGATION LINES, AND WE RECOMMEND STABILIZATION OF DECOMPOSED GRANITE.
- UNLESS SPECIALLY NOTED OTHERWISE, THESE PLANS SHOULD BE USED FOR HORIZONTAL AND VERTICAL LAYOUT OF CIVIL ELEMENTS ONLY. (TYPICALLY WATER, FIRE, SEWER AND STORM DRAIN LINES, VALVES, FIRE HYDRANTS, MANHOLES, CATCH BASINS, HEADWALLS, DRYWELLS, ETC.). FOR ALL OTHER HORIZONTAL LAYOUT (BUILDINGS, CURBS, WALKS, ETC.) SEE ARCHITECT'S PLAN.
- REMOVE FLOOD IRRIGATION STRUCTURES OUTSIDE THE ATHLETIC FIELDS.

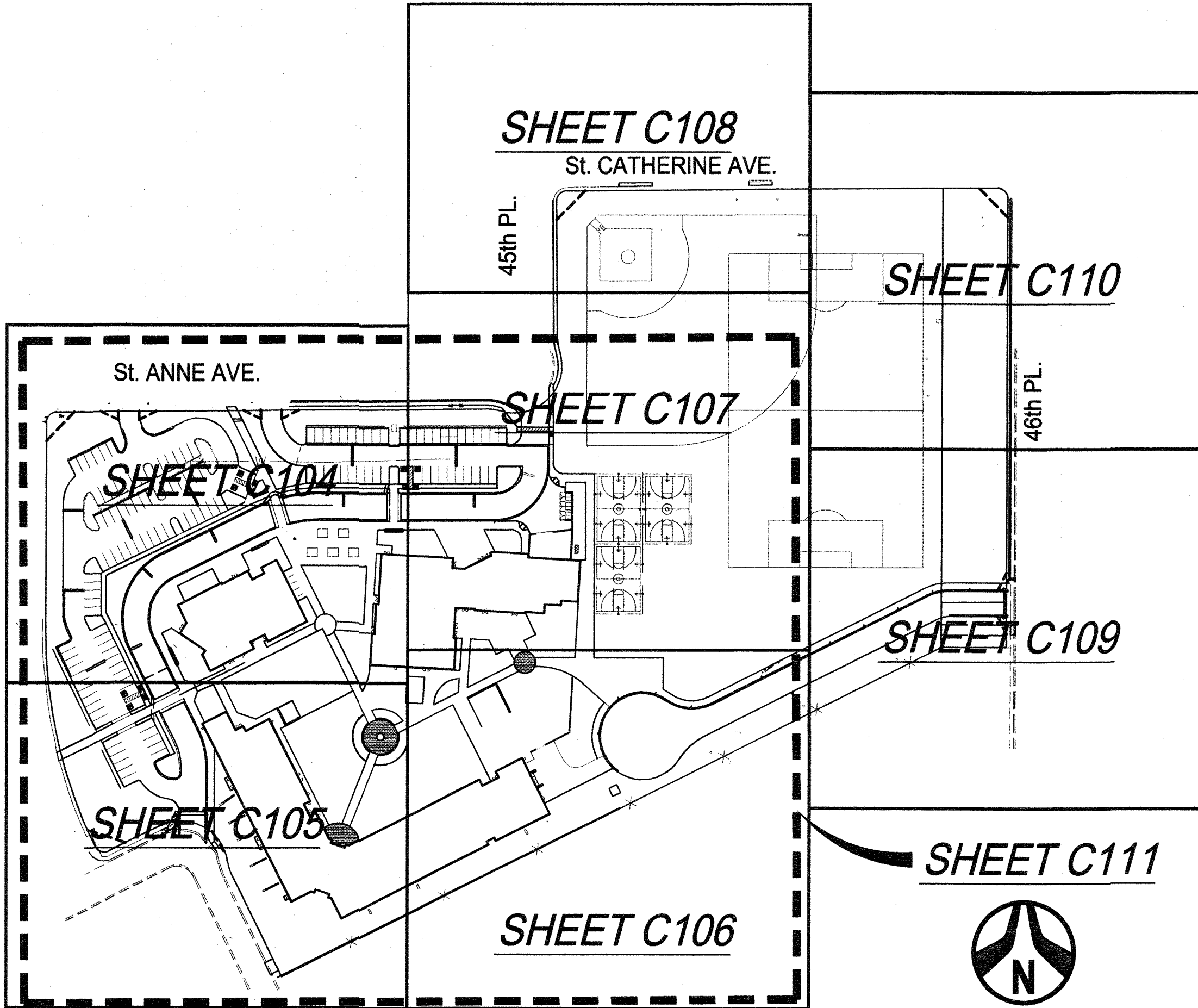
CITY OF PHOENIX GRADING AND DRAINAGE NOTES

- A GRADING PERMIT IS REQUIRED UNDER CHAPTER 32A OF THE PHOENIX CITY CODE.
- WHEN HAIL PERMITS ARE REQUIRED, THEY MUST BE OBTAINED PRIOR TO OR CONCURRENTLY WITH THE GRADING AND DRAINAGE PERMIT.
- EXCAVATING CONTRACTOR MUST GIVE LOCATION FOR WASTING EXCESS EXCAVATION AND A LETTER FROM OWNER GIVING PERMISSION FOR DUMPING PRIOR TO STARTING ON-SITE CONSTRUCTION. IF EXCESS EXCAVATION EXCEEDS 100 CUBIC YARDS, THE DISPOSAL SITE WILL ALSO REQUIRE A GRADING AND DRAINAGE PERMIT.
- PLANNING & DEVELOPMENT DEPARTMENT FIELD INSPECTION GROUP SHALL BE NOTIFIED 48 HOURS BEFORE ANY ON SITE AND/OR OFF-SITE CONSTRUCTION BEGINS. TELEPHONE (602) 262-7811.
- STAKING PAD ELEVATIONS IS THE RESPONSIBILITY OF THE OWNER AND HIS ENGINEER. THE OWNER'S ENGINEER SHALL SUBMIT THREE SEALED COPIES OF THIS GRADING AND DRAINAGE PLAN DESIGNATED AS "RECORD DRAWING" (BEARING AN ORIGINAL SIGNATURE) PRIOR TO THE REQUEST FOR FINAL INSPECTION.
- STAKING FINISH FLOOR ELEVATIONS IS THE RESPONSIBILITY OF THE OWNER AND HIS ENGINEER. THE OWNER'S ENGINEER SHALL SUBMIT THREE SEALED COPIES OF THIS GRADING AND DRAINAGE PLAN DESIGNATED AS "RECORD DRAWING" (BEARING AN ORIGINAL SIGNATURE) PRIOR TO THE REQUEST FOR FINAL INSPECTION.
- PAD CERTIFICATIONS WILL BE REQUIRED ON ALL LOTS WITHIN THE SUBDIVISION AND SUBMITTED TO THE CIVIL/SITE INSPECTOR PRIOR TO ANY CONCRETE CONSTRUCTED IN THE RIGHT-OF-WAY. PAD CERTIFICATION CAN BE SUBMITTED TO THE CIVIL/SITE INSPECTOR BY EITHER SUBMITTING ONE APPROVED BLACK-LINE AS-BUILT GRADING AND DRAINAGE PLAN OR IN LETTER FORMAT SHOWING THE DESIGN AND AS-BUILT PAD ELEVATIONS AS SHOWN ON THE APPROVED GRADING AND DRAINAGE PLAN. IT IS REQUIRED THAT THE AS-BUILT PLAN AND LETTER BE SEALED BY A CIVIL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF ARIZONA.
- A SEPARATE PERMIT IS NECESSARY FOR ANY OFFSITE CONSTRUCTION.
- AN APPROVED GRADING AND DRAINAGE PLAN SHALL BE ON THE JOB SITE AT ALL TIMES. DEVIATIONS FROM THE PLAN MUST BE PRECEDED BY AN APPROVED PLAN REVISION.
- GRADING AND DRAINAGE PLAN APPROVAL INCLUDES THE CONSTRUCTION OF ALL SURFACE IMPROVEMENTS SHOWN ON THE APPROVED PLAN, INCLUDING, BUT NOT LIMITED TO, RETENTION AREAS, SEDIMENTATION BASINS, AND/OR OTHER DRAINAGE FACILITIES, DRAINAGE PATTERNS, WALLS, CURBS, ASPHALT PAVEMENT, AND BUILDING FLOOR ELEVATION.
- GRADES SHOWN IN RETENTION BASINS ARE DESIGN FINISHED GRADES. SHOULD THE CONTRACTOR OR ANY SUBCONTRACTOR PLAN TO PLACE SPOIL DIRT FROM FOOTINGS, UTILITY TRENCHES, LANDSCAPING, SWIMMING POOLS, ETC. IN THE BASINS, THE BASINS SHOULD BE SUFFICIENTLY OVER-EXCAVATED DURING THE ROUGH GRADING OPERATION TO ALLOW FOR THE PLACEMENT OF THE FILL OR LANDSCAPING MATERIALS.
- CONTRACTOR IS RESPONSIBLE FOR LOCATING AND CONFIRMING DEPTHS OF ALL THE EXISTING UTILITY LINES WITHIN PROPOSED RETENTION BASIN AREAS. IF THE BASIN CANNOT BE CONSTRUCTED PER PLAN BECAUSE OF CONFLICTS, THE CONTRACTOR SHOULD DISCUSS MODIFICATION OF BASIN CONFIGURATION WITH THE CITY INSPECTOR TO DETERMINE IF A PLAN REVISION OR A FIELD CHANGE IS REQUIRED.
- ALL DRAINAGE PROTECTIVE DEVICES SUCH AS SWALES, INTERCEPTOR DITCHES, PIPES, PROTECTIVE BERMS, BARRIER WALLS, CONCRETE CHANNELS, OR OTHER MEASURES DESIGNED TO PROTECT ADJACENT BUILDINGS OR PROPERTY FROM STORM RUNOFF MUST BE COMPLETED PRIOR TO BUILDING CONSTRUCTION.
- PER SECTION 6.8.7 OF THE CITY OF PHOENIX STORM WATER POLICIES AND STANDARDS, SIDE SLOPES OF STORM WATER STORAGE FACILITIES SHALL BE NO STEEPER THAN 5:1 FOR IRRIGATED GRASS AREAS AND 3:1 FOR LANDSCAPE AREAS. SLOPE STABILIZATION MEASURES ARE REQUIRED FOR ALL SLOPES GREATER THAN 5:1. THE SLOPE STABILIZATION MEASURES MUST BE READILY MAINTAINABLE USING COMMON MAINTENANCE EQUIPMENT AND BE DESIGNED WITH CONSIDERATION TO AESTHETICS. THE SLOPE STABILIZATION MEASURES SHALL BE CONSISTENT WITH COMMONLY USED ENGINEERING PRACTICES. UN-STABILIZED DECOMPOSED GRANITE IS NOT ALLOWED ON SLOPES GREATER THAN 5:1.
- ALL RETAINING WALL ARE TO BE REVIEWED, PERMITTED, AND INSPECTED BY THE BUILDING SAFETY BRANCH OF THE PLANNING & DEVELOPMENT DEPARTMENT. ALL RETAINING WALLS ARE TO BE IN ACCORDANCE WITH SECTION 703 OF THE ZONING ORDINANCE AND SECTION 32-32 OF THE SUBDIVISION ORDINANCE FOR SPECIFIC WALL HEIGHT REQUIREMENTS. USE PERMIT IS REQUIRED FOR ALL OVER-HEIGHT RETAINING WALLS.
- ALL RAMPS MUST MEET 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND CITY OF PHOENIX SUPPLEMENT TO M.A.G. UNIFORM STANDARD SPECIFICATIONS AND DETAILS; 2% MAX CROSS SLOPES AND 12:1 MAX LONGITUDINAL SLOPES.
- CERTIFICATE OF OCCUPANCY (C OF O) AND/OR FINAL ELECTRICAL CLEARANCE FOR ANY BUILDING IS DENIED UNTIL ALL GRADING AND DRAINAGE IMPROVEMENTS ARE COMPLETED.
- EXISTING OR NEWLY DAMAGED AND/OR DISPLACED CONCRETE CURB, GUTTER, SIDEWALK, OR DRIVEWAY SLAB THAT IS WITHIN THE RIGHT-OF-WAY SHALL BE REPAIRED OR REPLACED, AS NOTED BY CITY INSPECTORS, BEFORE FINAL ACCEPTANCE OF THE WORK.
- THE ENGINEERING DESIGN ON THESE PLANS IS ONLY APPROVED BY THE CITY IN SCOPE AND NOT IN DETAIL. CONSTRUCTION QUANTITIES ON THESE PLANS ARE NOT VERIFIED BY THE CITY. APPROVAL OF THESE PLANS ARE FOR PERMIT PURPOSES ONLY AND SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN THE PLANS WHERE SUCH ERRORS ARE SUBSEQUENTLY FOUND TO BE IN VIOLATION OF ANY LAW, ORDINANCE, HEALTH, SAFETY, OR OTHER DESIGN ISSUES.
- THE CITY OF PHOENIX POLICE DEPARTMENT ENFORCES LAWS REGULATING THE OPERATION OF COMMERCIAL VEHICLES. THIS INCLUDES ENFORCEMENT OF FEDERAL, STATE, COUNTY AND LOCAL LAWS AND ORDINANCES. QUESTIONS REGARDING COMMERCIAL VEHICLE ENFORCEMENT MAY BE DIRECTED TO THE COMMERCIAL VEHICLE ENFORCEMENT SUPERVISOR AT (602) 495-7813 (TRAFFIC BUREAU SOUTH) OR (602) 495-6784 (TRAFFIC BUREAU NORTH).
- PLAN APPROVAL IS VALID FOR 180 DAYS. PRIOR TO PLAN APPROVAL EXPIRATION, ALL ASSOCIATED PERMITS SHALL BE PURCHASED OR THE PLANS SHALL BE RESUBMITTED FOR EXTENSION OF PLAN APPROVAL. THE EXPIRATION, EXTENSION, AND REINSTATEMENT OF CIVIL ENGINEERING PLANS AND PERMITS SHALL FOLLOW THE SAME GUIDELINES AS THOSE INDICATED IN THE PHOENIX BUILDING CONSTRUCTION CODE ADMINISTRATIVE PROVISIONS SECTION 105.3 FOR BUILDING PERMITS.
- CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL CONFORM TO THE LATEST APPLICABLE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND DETAILS AND THE LATEST CITY OF PHOENIX SUPPLEMENT TO THE MAG UNIFORM STANDARD SPECIFICATIONS AND DETAILS.
- COMPACTON SHALL COMPLY WITH M.A.G. SECTION 601.
- OBSTRUCTIONS TO PROPOSED IMPROVEMENTS IN THE RIGHT-OF-WAY SHALL BE REMOVED OR RELOCATED BEFORE BEGINNING CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- THE ACTUAL POINT OF PAVEMENT MATCHING AND/OR TERMINATION SHALL BE DETERMINED IN THE FIELD BY THE CITY OF PHOENIX, PLANNING & DEVELOPMENT DEPARTMENT FIELD INSPECTOR.
- PAVEMENT REPLACEMENT THICKNESS AND TYPE ARE TO BE PER M.A.G. SECTION 336 AND C.O.P. DETAIL P1200 -TYPE B. CURB AND GUTTER REPLACEMENT SHALL BE A MINIMUM OF ONE (1) FULL SECTION; PER M.A.G. STANDARD DETAIL 220. SIDEWALK REPLACEMENT SHALL BE A MINIMUM OF ONE (1) FULL PANEL PER C.O.P. DETAIL P1230.
- TREES AND SHRUBBERY IN THE RIGHT-OF-WAY THAT CONFLICT WITH PROPOSED IMPROVEMENTS SHALL NOT BE REMOVED WITHOUT APPROVAL OF THE CITY LANDSCAPE ARCHITECT OR HIS ASSIGNEES. THE PERMITTEE SHALL BE RESPONSIBLE FOR OBTAINING AUTHORIZATION TO REMOVE AND/OR RELOCATE SAID TREES OR SHRUBBERY BY CALLING THE PARKS AND RECREATION DEPARTMENT AT (602) 262-6501. A PAVEMENT CUT SURCHARGE SHALL BE ASSESSED ON THIS PROJECT FOR ANY TRENCHING OR POTHOLING IN NEW ASPHALT PAVEMENT THAT IS LESS THAN 30 MONTHS OLD. SURCHARGE FEES ASSESSED ARE IN ADDITION TO THE REGULAR PERMIT FEES AND ARE OVER AND ABOVE ANY SPECIAL BACKFILL, COMPACTON, AND PAVEMENT REPLACEMENT STIPULATIONS THAT MAY BE IMPOSED AS A CONDITION OF PERMITTING. PAVEMENT CUT SURCHARGE FEES ARE ASSESSED IN ACCORDANCE WITH SECTION 31-38 OF THE PHOENIX CITY CODE.

REVISIONS		
DELTA	DESCRIPTION	DATE
ID		
1	GENERAL REVISIONS TO CIVIL IMPROVEMENTS	8/30/18
2	PARENT DROP OFF REMOVAL, RELOCATE NORTH PARKING SPACES & GENERAL CIVIL IMPROVEMENTS	10/30/18

GRADING AND DRAINAGE WITH  
OFFSITE IMPROVEMENTS  
FOR  
NEVITT ELEMENTARY SCHOOL

4525 E. ST. ANNE AVE.  
PHOENIX, AZ. 85042



KEY MAP

DRAINAGE STATEMENT

SITE IS IN A SPECIAL FLOOD HAZARD AREA (Y) (N)  
OFFSITE FLOWS AFFECT THIS SITE (Y) (N)  
RETENTION VOLUME IS PROVIDED FOR THE "2.2" STORM EVENT.  
EXTREME STORM OUTFALLS THE SITE AT THE NORTHEAST CORNER  
AT THE ELEVATION OF 1165.4

DRAINAGE CALCULATIONS

PRE-DEVELOPMENT RETENTION VOLUME REQUIRED (V<sub>R</sub>)  
V<sub>R</sub> = RETENTION VOLUME REQUIRED, C.F.  
P = RAINFALL DEPTH 2.2 IN. (NOAA 14)  
A = TOTAL AREA, 596,685 S.F.  
C = RETENTION COEFFICIENT, 0.5 (COMPOSITE C)  
V<sub>R</sub> = (2.2 IN. / 12) \* 0.51 \* 596,685 S.F.  
V<sub>R</sub> = 55,686 C.F.

FIRST FLUSH V<sub>FF</sub>

V<sub>FF</sub> = V=(P/12)\*C\*A  
P = 0.5 IN (FIRST FLUSH)  
A = TOTAL AREA, 111,078 S.F.  
C = 1.0 (FIRST FLUSH)  
V<sub>FF</sub> = (0.5 IN. / 12) \* 1.0 \* 596,685 S.F.  
V<sub>FF</sub> = 24,861 C.F.

POST-DEVELOPMENT RETENTION VOLUME REQUIRED (V<sub>R</sub>)  
V<sub>R</sub> = RETENTION VOLUME REQUIRED, C.F.  
P = RAINFALL DEPTH 2.2 IN. (NOAA 14)  
A = TOTAL AREA, 596,685 S.F.  
C = RETENTION COEFFICIENT, 0.5 (COMPOSITE C)  
V<sub>R</sub> = (2.2 IN. / 12) \* 0.5 \* 596,685 S.F.  
V<sub>R</sub> = 54,696 C.F. > V<sub>FF</sub>; V<sub>R</sub> GOVERNS!

INDIVIDUAL BASIN ANALYSIS							As Built	
BASIN	Total Area	C-Coefficient	Volume Required		Volume Provided		Comments	
ID	[acres]	C	[ft <sup>3</sup> ]	[acre-ft]	[ft <sup>3</sup> ]	[acre-ft]		
1	0.44	0.67	3,090	0.05	3,850	0.09	OK!	
2	0.20	0.72	1,124	0.03	1,200	0.03	OK!	
3	0.65	0.67	3,480	0.08	4,300	0.10	Interconnected Basins	
4	0.34	0.70	1,868	0.04	1,230	0.02	3 & 4 w/Eq. Pipes	
3-4			5,348	0.12	5,530	0.14	OK!	
5	0.15	0.36	421	0.01	800	0.032	OK!	
6	11.21	0.49	43,973	1.01	175,326	4.02	OK!	
7	0.47	0.55	2,465	0.04	2,497	0.06	OK!	
Total/Avg	13.71	0.53	56,559	1.30	190,166	4.37	OK!	

OWNER / DEVELOPER

TEMPE ELEMENTARY SCHOOL DISTRICT #3  
205 S. RURAL RD.  
TEMPE, AZ 85281  
PHONE: (480) 277-6746  
CONTACT: COURTNEY QUESADA  
CQUESADA@TEMPE.SCHOOLS.ORG

ARCHITECT

HDA ARCHITECTS, LLC  
459 N. GILBERT RD. SUITE C-200  
GILBERT, AZ. 85345  
PHONE: (480) 539-8800  
CONTACT: PETE BARKER  
PETEB@HDA-ARCHITECTS.COM

SHEET INDEX

C101 COVER SHEET  
C102 QUANTITIES AND DETAILS  
C103 DEMO PLAN SHEET  
C104-C110 GRADING PLAN SHEETS

PROPERTY ADDRESS

4525 E. ST. ANNE AVE.  
PHOENIX, AZ. 85042

PROJECT DESCRIPTION

THE DEMOLITION OF 3 EXISTING SCHOOL BUILDINGS AND ACCESSORIES BUILDINGS AND CONSTRUCTION OF 3 NEW SCHOOL BUILDINGS, ASSOCIATED ACCESSORIES BUILDINGS, PLAY FIELDS, DRAINAGE AND LANDSCAPE IMPROVEMENTS ON AN EXISTING ELEMENTARY SCHOOL CAMPUS.

BENCHMARK

NORTHEAST CORNER OF SECTION 31, TOWNSHIP 1 NORTH, RANGE 4 EAST. \*BRASS CAP IN HANDHOLE ELEVATION = 1145.868 (NGVD 1929 DATUM)

BASIS OF BEARING

THE MONUMENT LINE OF SAINT CATHERINE AS MEASURED BETWEEN THE FOUND BRASS CAP FLUSH AT 44TH STREET & SAINT CATHERINE AVENUE & THE FOUND BRASS CAP FLUSH ON SAINT CATHERINE AVENUE MARKING THE EAST BOUNDARY OF THE PONDEROSA VILLAGE UNIT 2 SUBDIVISION AS RECORDED AT BK 153 PAGE 46, M.C.R. RECORD BEARING= N89°27'20"E MEASURED BEARING= N89°31'47"E

LEGAL DESCRIPTION

TRACT A OF PONDEROSA VILLAGE UNIT 2, A SUBDIVISION OF PARTS OF SECTION 31, TOWNSHIP 1 NORTH, RANGE 4 EAST OF THE GILA RIVER BASE AND MERIDIAN AND RECORDED IN BOOK 153 OF MAPS, PAGE 46, MARICOPA COUNTY RECORDS, MARICOPA COUNTY, ARIZONA

OFFSITE QUANTITIES

ASPHALTIC CONCRETE ..... 145 SY  
PAVEMENT REPAIR (MICROSURFACING) ..... 2,760 SY  
INSTALL CURB AND GUTTER PER M.A.G. 220-1 ..... 450 LF  
SIDEWALK PER COP STD. DTL. P-1230 ..... 1,300 SF  
DRIVEWAYS PER COP STD. DTL. P-1255-2 ..... 4 EA

NOTE:  
ALL QUANTITIES ARE ESTIMATES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALCULATING THEIR OWN QUANTITIES FOR BIDDING.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "RECORD DRAWING" MEASUREMENTS AS SHOWN HEREON WERE MADE UNDER MY SUPERVISION, OR AS NOTED, AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED ENGINEER/LAND SURVEYOR

DATE

REGISTRATION NUMBER

CITY OF PHOENIX APPROVAL BLOCK

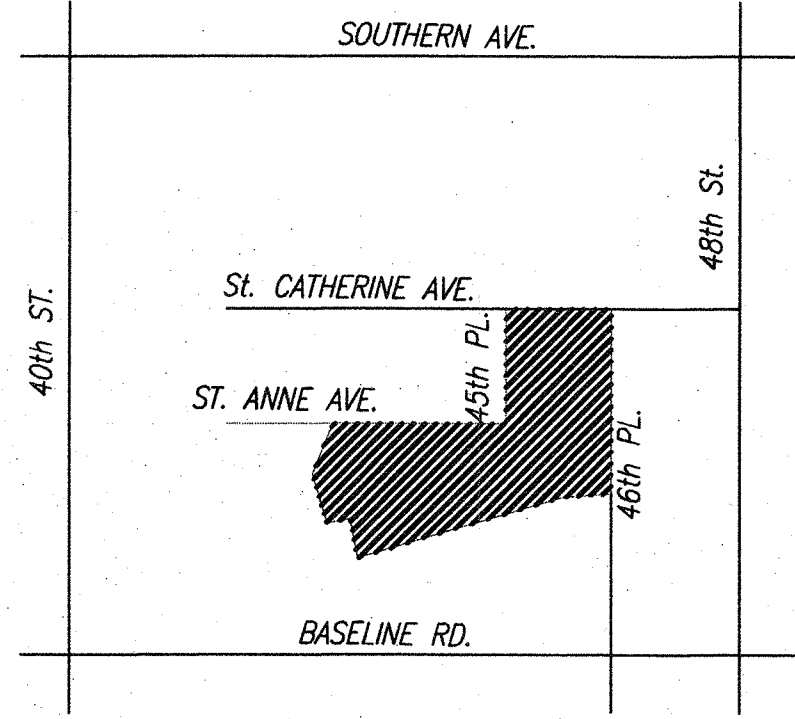
City of Phoenix  
Planning & Development Department  
These plans have been approved for the issuance of the following permits:

Grading	MCAR	Phase	_____	Date	10/24/18
SWMP		Phase	_____	Date	_____
Paving		Phase	_____	Date	_____
Concrete	CCO	Phase	_____	Date	10/24/18
Drainage Facilities	MCAR	Phase	_____	Date	_____
Water		Phase	_____	Date	_____
Fire Line		Phase	_____	Date	_____
Wastewater		Phase	_____	Date	_____
Miscellaneous	CPA/MCAR	Phase	_____	Date	10/24/18



Call before you dig.  
1.800.STAKE.IT  
602.263.1100

RVS# 1800657-02  
KVA# 17-3110  
CCPR# 1800048  
SDEV# 1700631  
PAPP# 1705053  
OS# 02-38



VICINITY MAP:

SCALE: NTS

LEGEND

- EXISTING STORM DRAIN
- EXISTING SANITARY MANHOLE
- EXISTING POWER POLE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- EXISTING WATER METER
- EXISTING BACKFLOW PREVENTOR
- EXISTING VALVE NUMBER
- EXISTING MANHOLE NUMBER
- PROPOSED GRADE
- EXISTING GRADE
- EXISTING WATER LINE
- EXISTING SEWER LINE
- EXISTING NATURAL GAS LINE
- EXISTING OVERHEAD ELECTRIC LINE
- PROPOSED SEWER LINE
- PROPOSED WATER LINE
- PROPOSED FIRE LINE
- RIGHT-OF-WAY
- EXISTING CENTER LINE
- PROPERTY LINE
- PUE
- GRADE BREAK
- 100 YR WSE

FIELD COPY  
KEEP AT JOB SITE

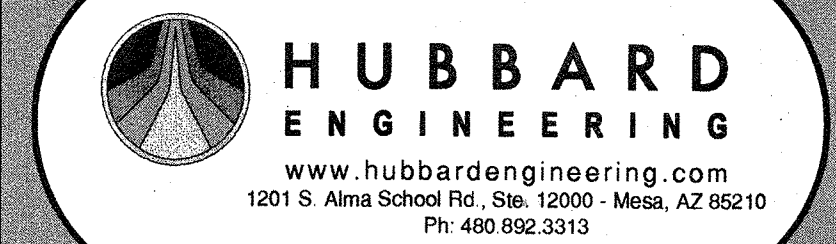
City of Phoenix  
Planning & Development Department  
These plans have been approved for the issuance of the following permits:

Grading	MCAR	Phase	_____	Date	10/25/18
SWMP		Phase	_____	Date	_____
Paving		Phase	_____	Date	_____
Concrete	CCO	Phase	_____	Date	10/25/18
Drainage Facilities	MCAR	Phase	_____	Date	_____
Water		Phase	_____	Date	_____
Fire Line		Phase	_____	Date	_____
Wastewater		Phase	_____	Date	_____
Miscellaneous	CPA/MCAR	Phase	_____	Date	10/25/18

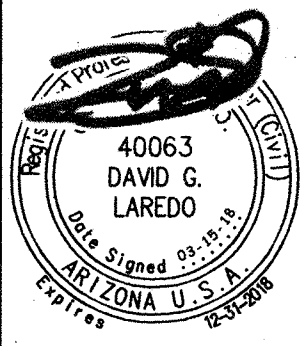
City of Phoenix  
Planning & Development Department  
These plans have been approved for the issuance of the following permits:

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SWMP		Phase	_____	Date	_____
Paving		Phase	_____	Date	_____
Concrete	CCO	Phase	_____	Date	4/3/18
Drainage Facilities	MCAR	Phase	_____	Date	_____
Water		Phase	_____	Date	_____
Fire Line		Phase	_____	Date	_____
Wastewater		Phase	_____	Date	_____
Miscellaneous	CPA/MCAR	Phase	_____	Date	_____

Project No.	Date	Sheet No.
17129	03/15/2018	C101
Project Manager		Project Engineer
D. LAREDO, P.E.		M. WOLF, P.E.



ADDITIONS AND RENOVATIONS TO  
NEVITT ELEMENTARY SCHOOL  
TEMPE ELEMENTARY SCHOOL DISTRICT NO. 3  
4525 E. ST. ANNE AVE.  
PHOENIX, AZ. 85042



Job No. 1709  
Drawn by \_\_\_\_\_  
Checked by \_\_\_\_\_  
Date 03/15/18  
Revised

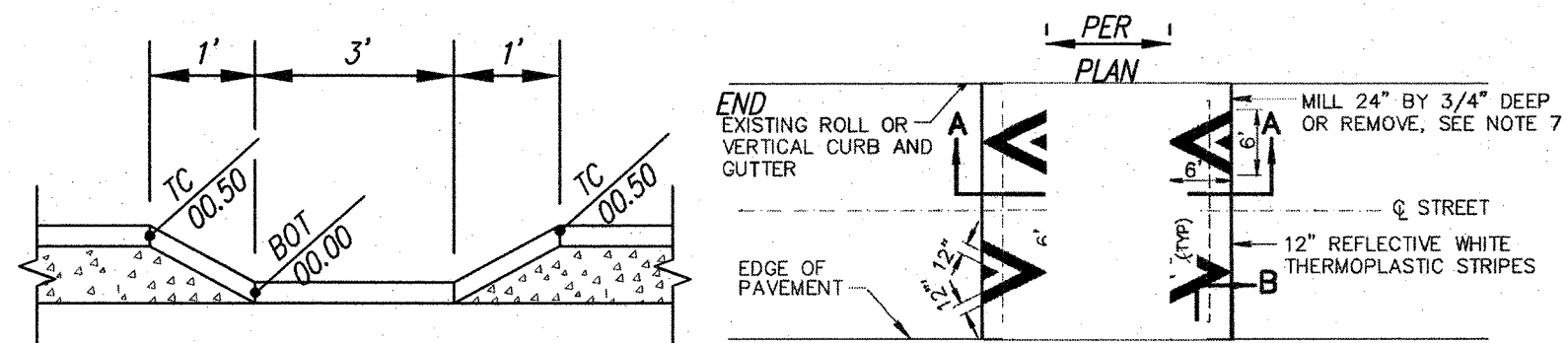
FOR  
CONSTRUCTION

HDA ARCHITECTS, LLC.  
459 N. Gilbert Road, Suite C-200, GILBERT, AZ 85234  
TEL: (480) 539 8800 FAX: (480) 539 8808  
Coversheet  
Grading & Drainage Plan w/ Offsite Improvements

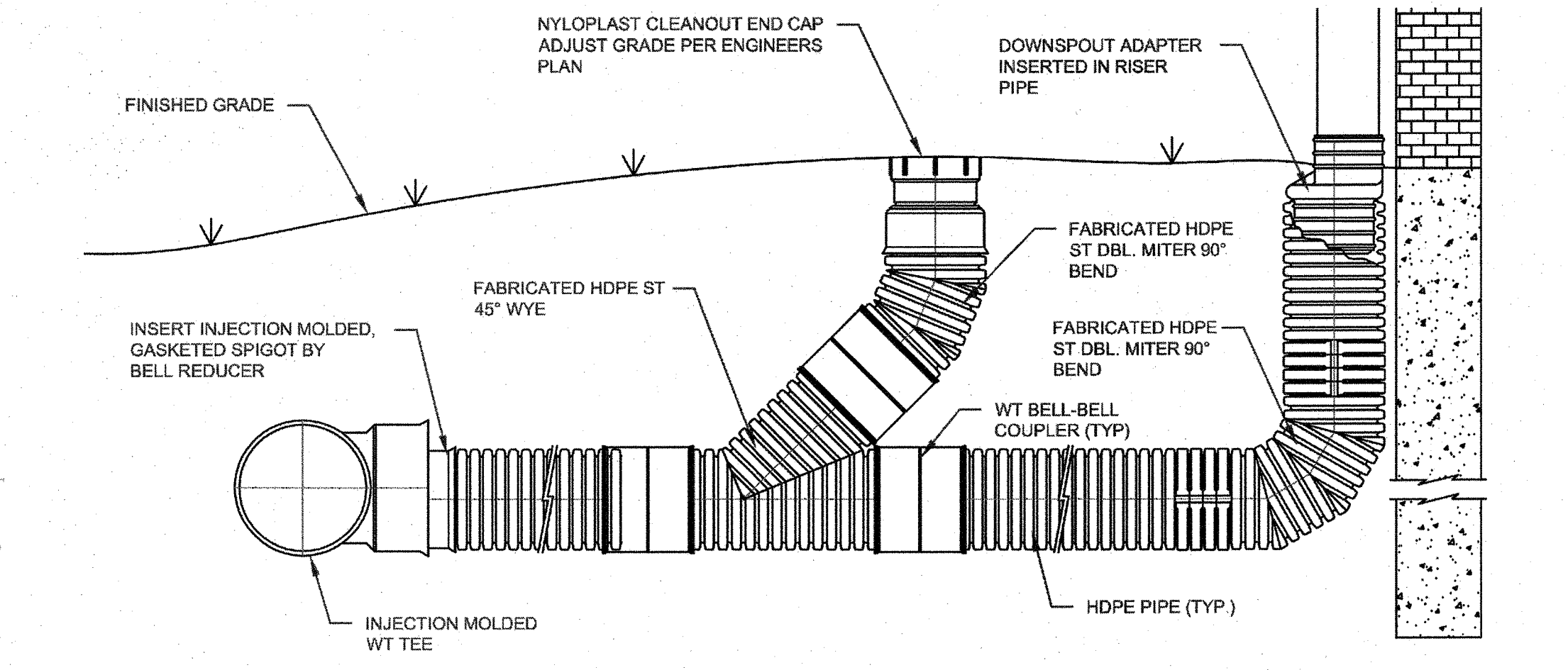
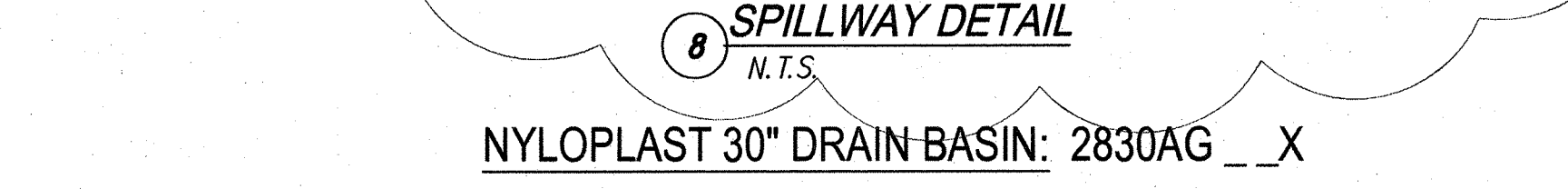
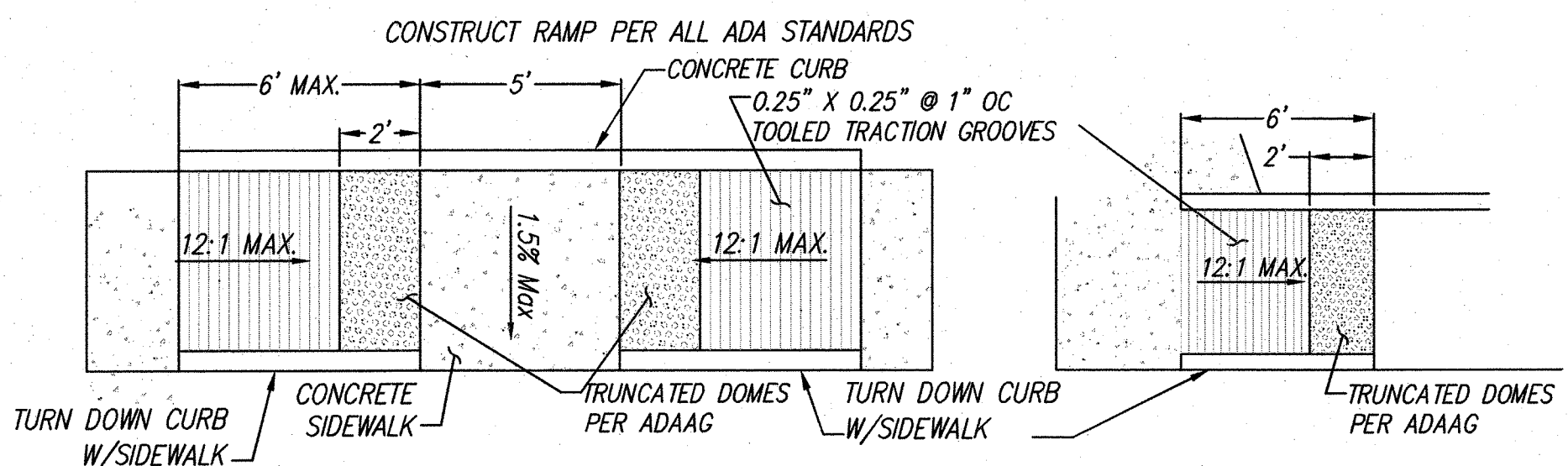
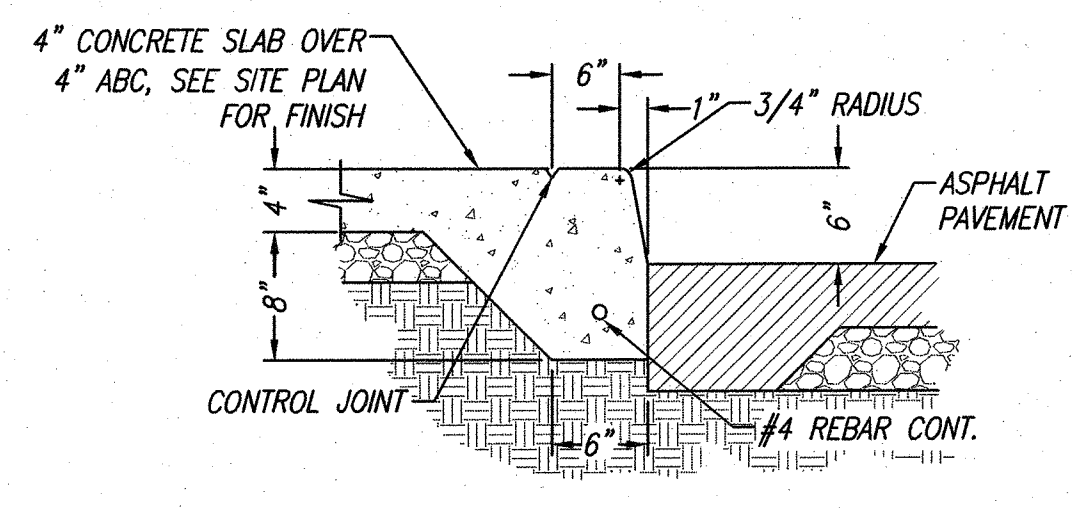
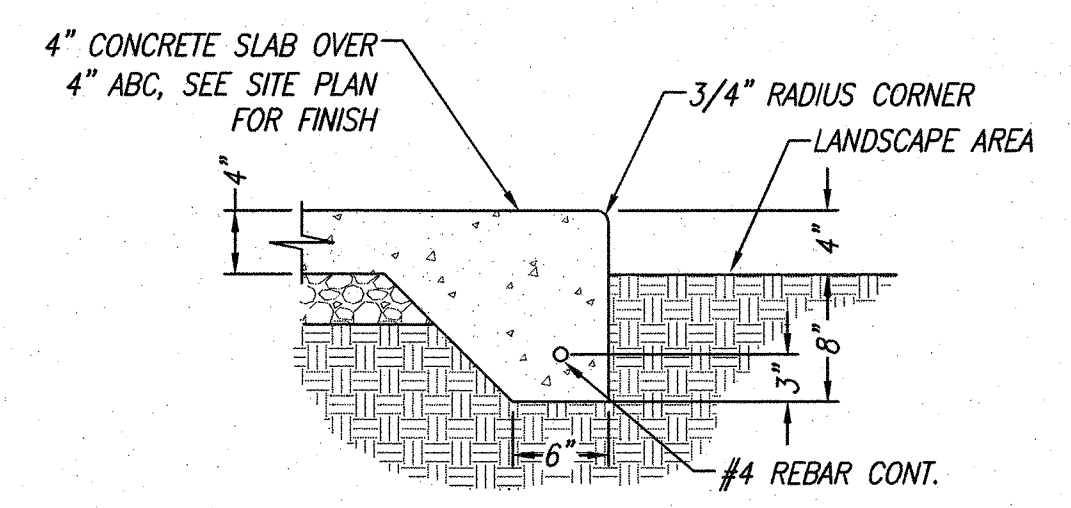
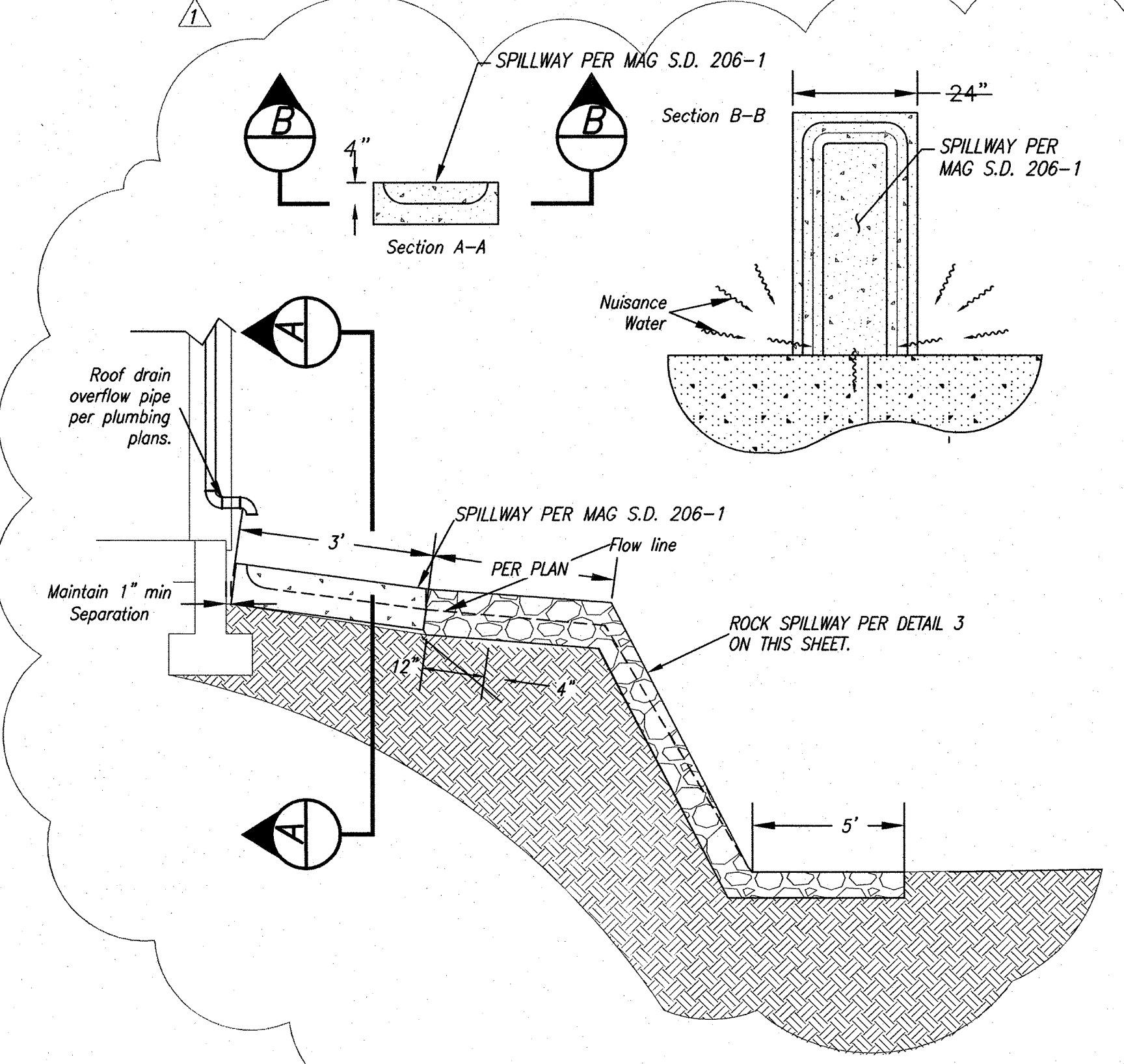
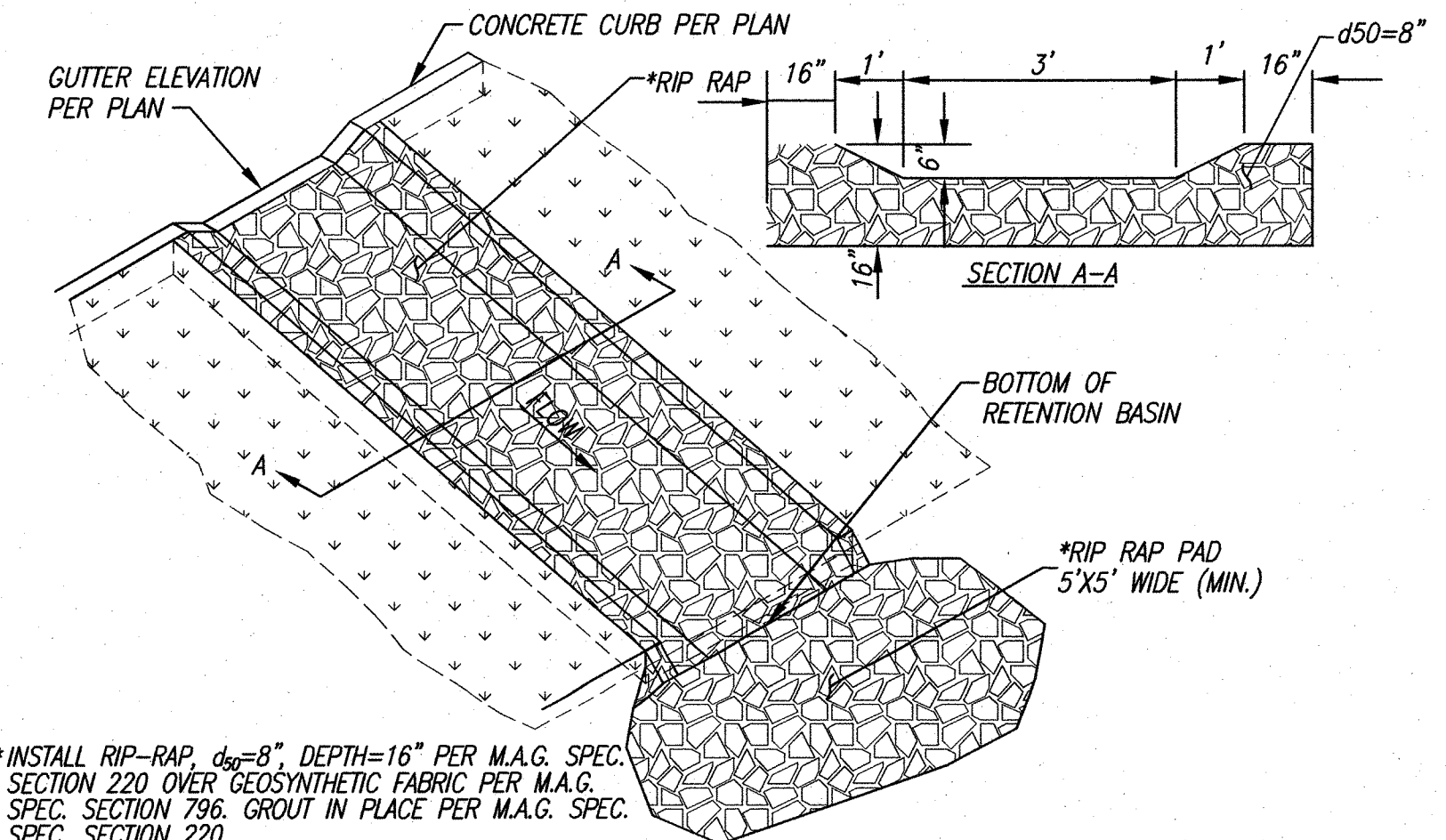
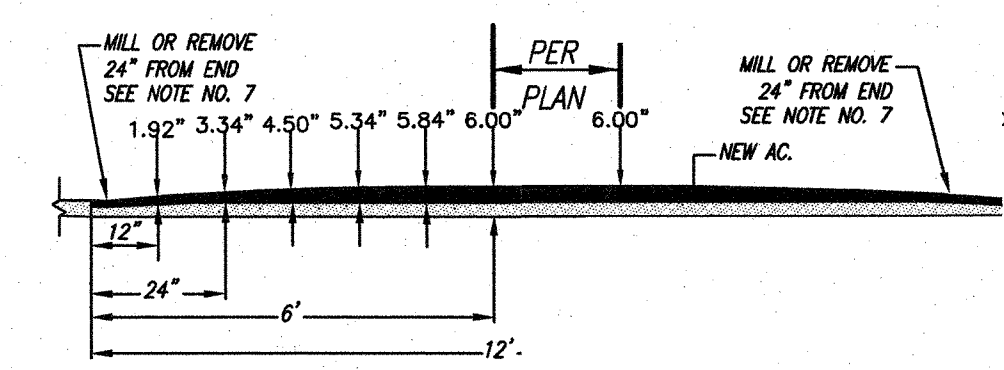


Sheet No.  
C101





- NOTES:**
- HUMPS MUST BE THE FULL 6" FOR MAXIMUM EFFECT BUT SHALL NOT EXCEED 6.25".
  - HUMPS CONSTRUCTED OVER 6.25" OR LESS THAN 6.00" SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
  - CROSS-SECTION ELEVATIONS SHALL HAVE A MAXIMUM TOLERANCE OF +0.25".
  - SPEED HUMPS SHALL NOT BE PLACED OVER MANHOLES, WATER VALVES, SURVEY MONUMENTS, JUNCTION CHAMBERS, ETC. OR IN CONFLICT WITH DRIVEWAYS.
  - SPEED HUMPS MUST BE PLACED AT LOCATIONS APPROVED BY THE AGENCY.
  - HUMP TO BE CONSTRUCTED WITH ASPHALT MIX APPROVED BY THE AGENCY. ASPHALT COMPACTION SHALL BE PER SECTION 321. A TACK COAT PER SECTION 713 SHALL BE APPLIED PRIOR TO APPLICATION OF PAVEMENT.
  - INSTALLATION JOINTS:
    - STANDARD INSTALLATION: THE EXISTING ROADWAY SHALL BE MILLED TO A MINIMUM DEPTH OF 3/4" AROUND THE PERIMETER. CROSS SECTION DIMENSIONS DO NOT INCLUDE THE 3/4" MILLING. CONTRACTOR MUST PROVIDE VERIFICATION OF CROSS-SECTION DIMENSIONS.
    - ALTERNATIVE INSTALLATION: FOR TRANSVERSE JOINTS (CROSS ROADWAY), THE EXISTING ASPHALT SHALL BE SAW CUT AND REMOVED FOR A WIDTH OF 24". THE ASPHALT SHALL BE REPLACED WITH THE SAME ASPHALT AND AT THE SAME TIME AS THE HUMP ASPHALT. FOR LONGITUDINAL JOINTS, THE EXISTING ASPHALT SHALL BE OVERLAP AND TAPERED IN 12". CROSS-SECTION DIMENSIONS REFLECT DISTANCES FROM THE SURFACE OF EXISTING ASPHALT.
    - CONTACT THE AGENCY (OR INSPECTOR) ONE WEEK PRIOR TO INSTALLATION TO COORDINATE PAVEMENT MARKINGS AND SIGNING.

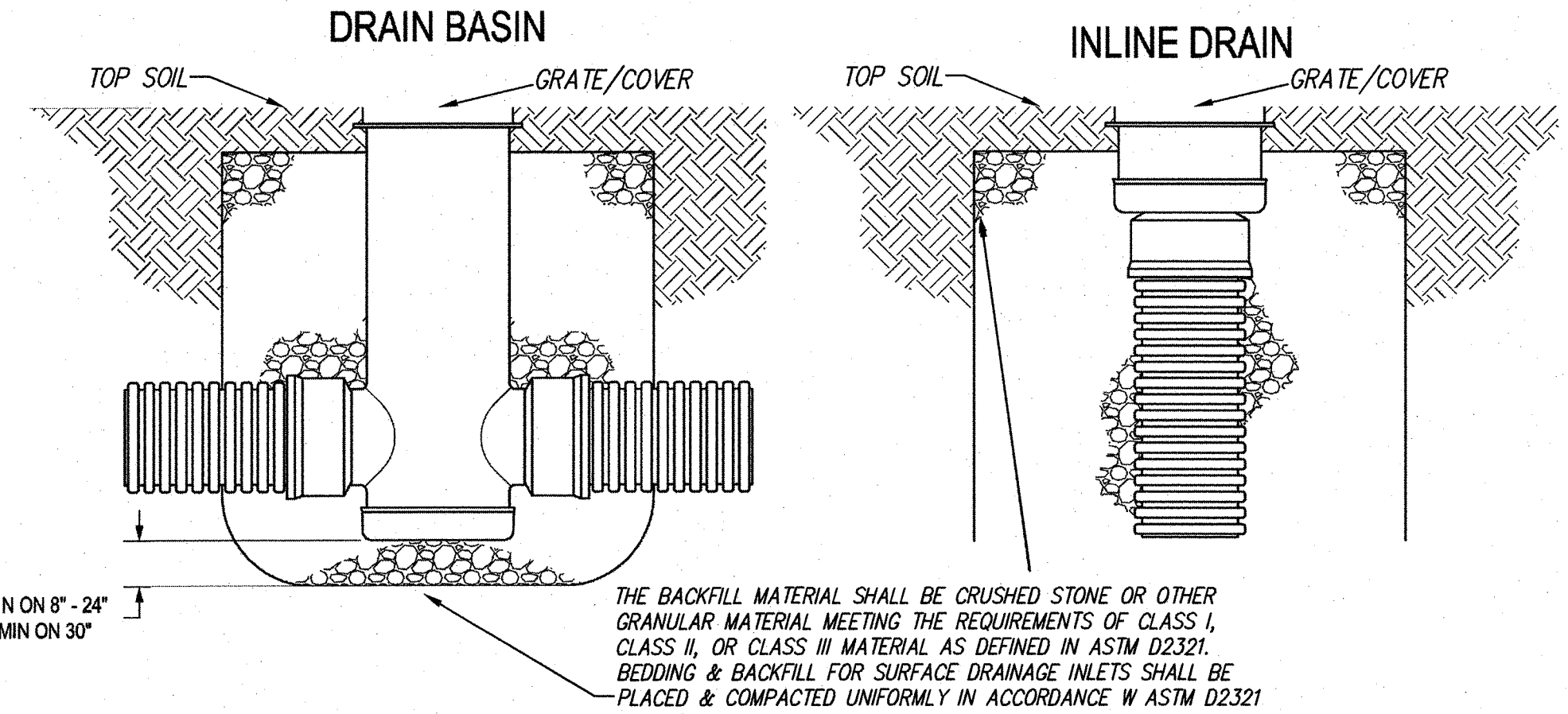


2	FORMATTING UPDATES AND RENAMED	TJR	03/07/14	
REV	DESCRIPTION	BY	MM/DD/YY	CHKD
1	BOOF DRAIN (46 Dwg WYE CLEANOUT AND FITTING)	ADS		

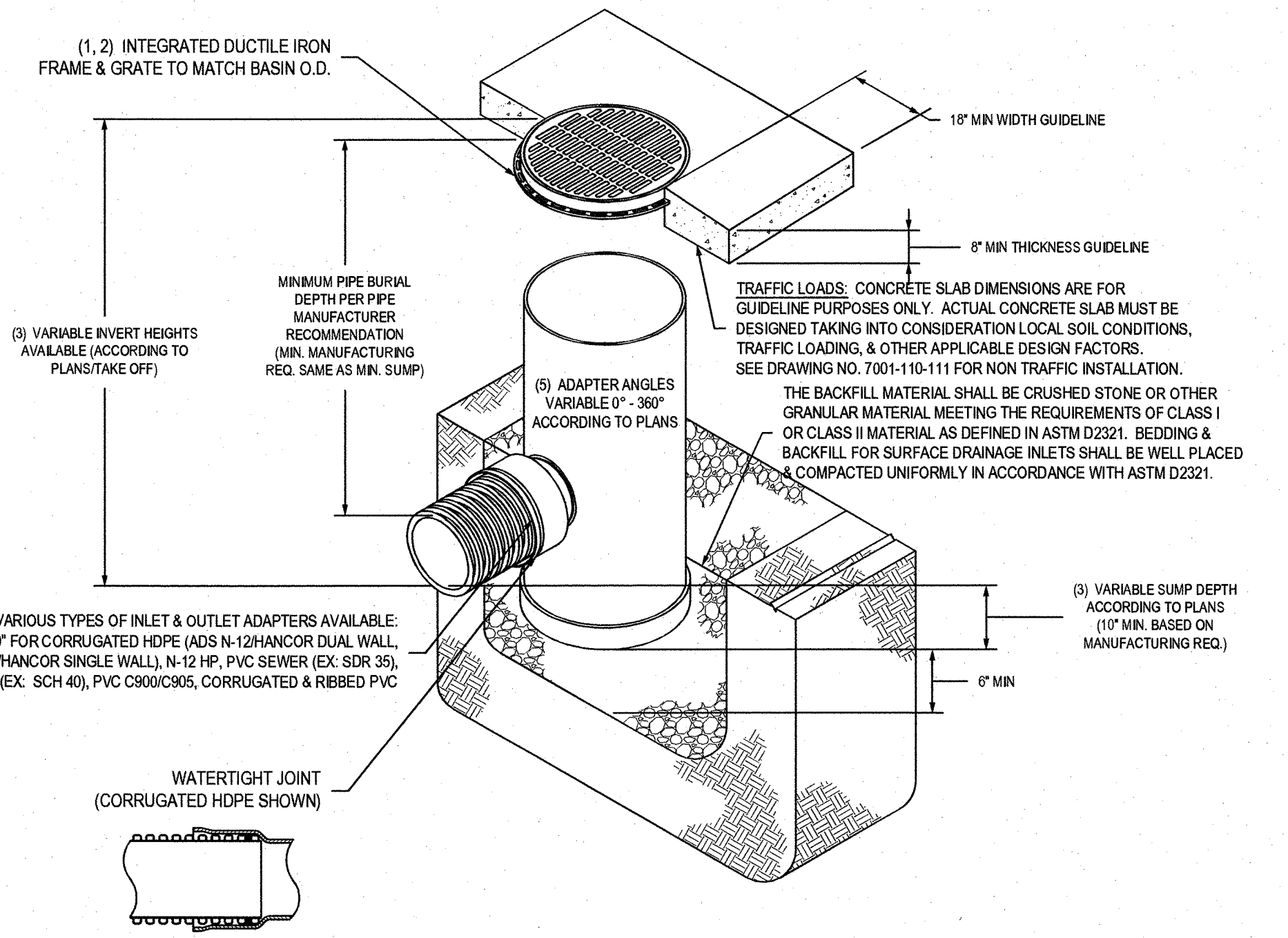
ADVANCED DRAINAGE SYSTEMS, INC. (ADS) HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

4640 TRUEMAN BLVD  
HILLIARD, OHIO 43026  
ADVANCED DRAINAGE SYSTEMS, INC.

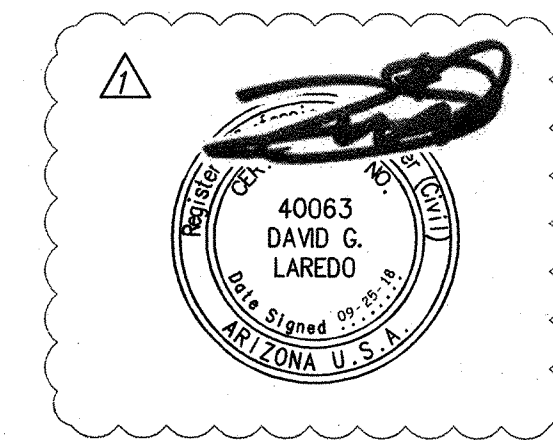
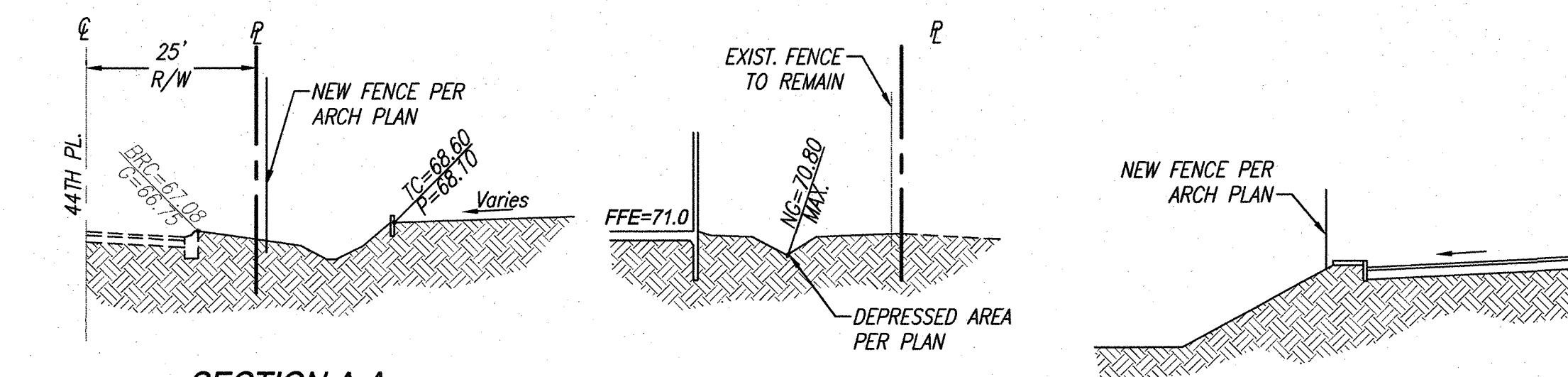
DRAWING NUMBER: STD-1003



DRAWN BY CJA		MATERIAL		3130 VERONA AVE BURLINGTON, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com	
DATE	9-30-99	PROJECT NO./NAME	DRAIN BASIN & INLINE DRAIN NON TRAFFIC INSTALLATION		
REVISED BY	MMH	DATE	03-11-16	DWG NO.	7001-110-111
DWG SIZE	A	SCALE	1:25	SHEET	1 OF 1
DWG NO.		7001-110-111			
REV		E			



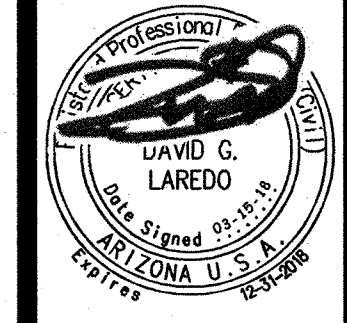
DRAWN BY EBC		MATERIAL		3130 VERONA AVE BURLINGTON, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com	
DATE	04-03-06	PROJECT NO./NAME	30 IN DRAIN BASIN QUICK SPEC INSTALLATION DETAIL		
REVISED BY	CCA	DATE	08-27-13	DWG NO.	7001-110-193
DWG SIZE	A	SCALE	1:25	SHEET	1 OF 1
DWG NO.		7001-110-193			
REV		E			



Project No.	17129	Date	03/15/2018	Sheet No.	C102
Project Manager	D. LAREDO, P.E.	Project Engineer	M. WOLF, P.E.		

**HUBBARD ENGINEERING**  
www.hubbardengineering.com  
1201 S. Alma School Rd., Ste. 12000 • Mesa, AZ 85210  
Ph: 480.892.3313

ADDITIONS AND RENOVATIONS TO  
NEVITT ELEMENTARY SCHOOL  
TEMPE ELEMENTARY SCHOOL DISTRICT NO. 3  
4525 E. ST. ANNE AVE.  
PHOENIX, AZ 85042



Job No.	1709
Drawn	DL
Checked	MSW
Date	03/15/18
Revised	

FOR CONSTRUCTION

HDA ARCHITECTS, LLC.  
459 N. Gilbert Road, Suite C-200, GILBERT, AZ 85234  
TEL: (480) 539 8800 FAX: (480) 539 8808  
Cross Sections & Details  
Grading & Drainage Plan w/ Offsite Improvements

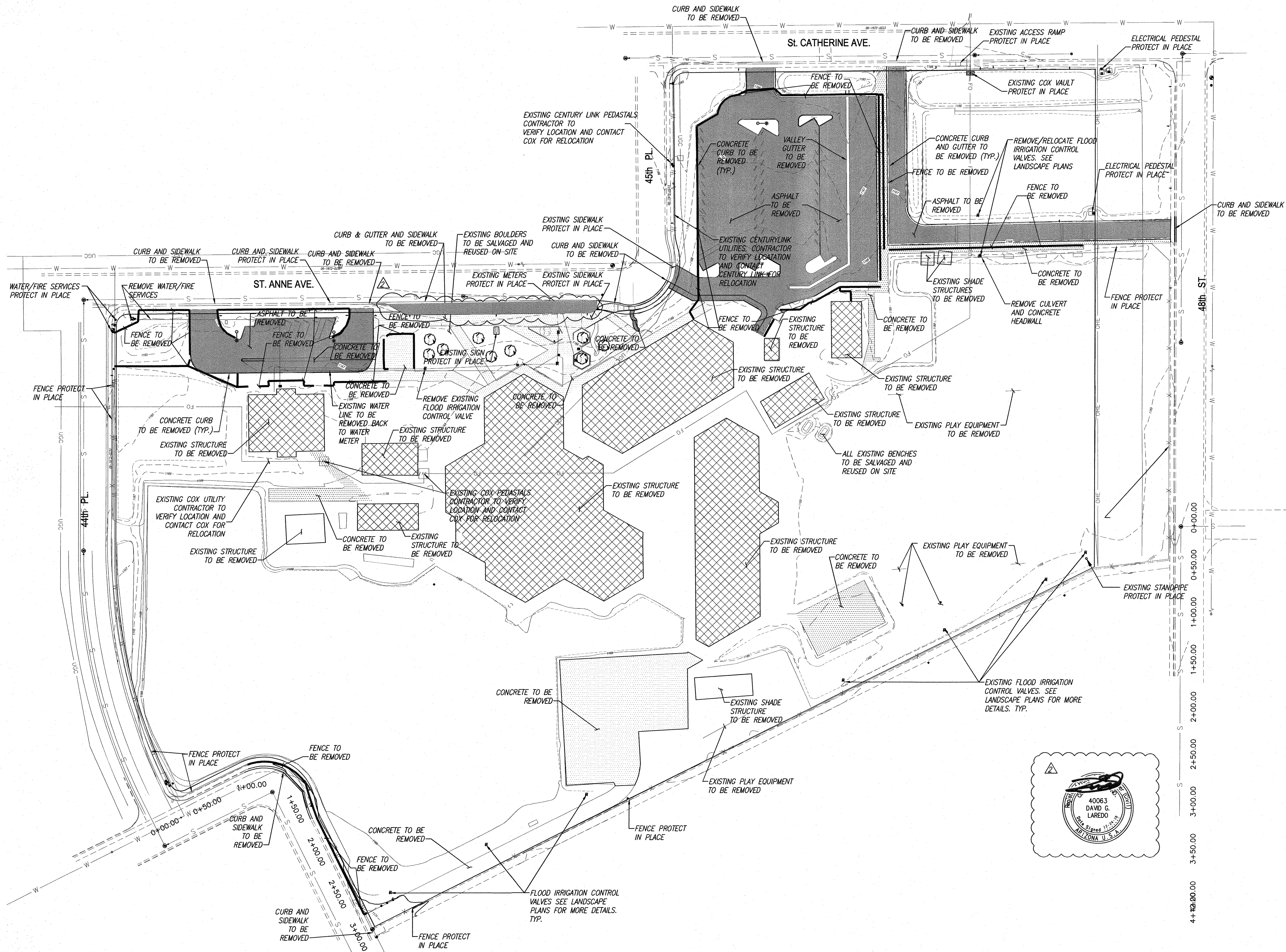
**HDA**  
HDA ARCHITECTS, LLC.

Sheet No.  
C102

PAPP#1705053 KIVA#17-3110



THIS SHEET FOR REFERENCE ONLY



QUANTITIES

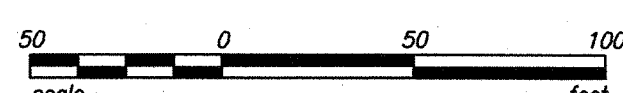
	DEMO BUILDING/STRUCTURE = ±74,360 SF
	DEMO CONCRETE = ± 5,332 SY
	DEMO ASPHALT = ± 4,252 SY

LEGEND

	EXISTING GAS
	EXISTING SEWER LINE
	EXISTING WATER LINE
	EXISTING UNDERGROUND ELEC.
	EXISTING UNDERGROUND COMM.
	EXISTING OVERHEAD ELEC.
	EXISTING STORM DRAIN
	EXISTING BACKFLOW PREVENTOR
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
	EXISTING SEWER MANHOLE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING POWER POLE
	EXISTING WATER METER
	EXISTING SEWER CLEANOUT

CONTRACTOR NOTE:

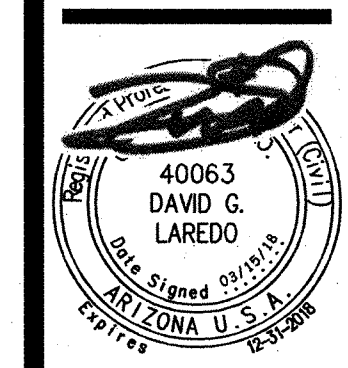
1. ANY UTILITY LOCATED WITHIN THE PROJECT NOT FOUND ON THIS PLAN SHEET, PLEASE NOTIFY THE ENGINEER.
2. ALL QUANTITIES SHOWN ARE PRELIMINARY ESTIMATES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN ESTIMATES.
3. CONTRACTOR TO SALVAGE USABLE PLAY EQUIPMENT FOR NEW ON-SITE DESIGNATED AREAS OR OTHER OFF-SITE SCHOOL DISTRICT SITES.
4. CONTRACTOR TO SALVAGE EXISTING USABLE STRUCTURES, EQUIPMENT & AESTHETIC ITEMS, SUCH AS BUT NOT LIMITED TO CANOPY STRUCTURES, BENCHES, BOULDERS, ELECTRICAL FEEDER LINES AND ANY MAIN COMPONENTS. WHEN POSSIBLE RELOCATE STRUCTURES AND/OR EQUIPMENT ON-SITE.



Project No. <b>17129</b>	Date <b>03/15/2018</b>	Sheet No. <b>C103</b>
Project Manager <b>D. LAREDO, P.E.</b>	Project Engineer <b>M. WOLF, P.E.</b>	

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PHOENIX, AZ 85042



Job No.	1709
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Checked	MSW
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TEL: (480) 539 8800 FAX: (480) 539 8608  
Demo Grading & Drainage Plan w/Offsite Improvements



Sheet No.  
**C103**





20 0 20 40  
feet  
SCALE 1"=20'

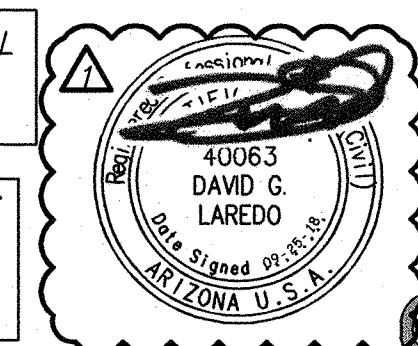
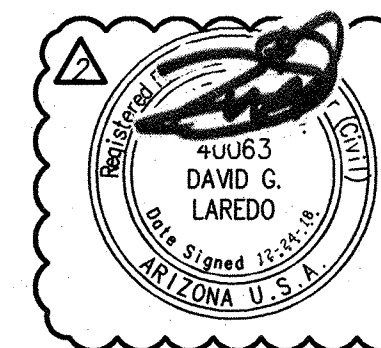
**GRADING NOTES:**

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- 10 INSTALL ROLL CURB PER MAG S.D. 220-1 TYPE 'C'.
- 11 CONSTRUCT MONOLITHIC CONCRETE SIDEWALK PER DETAILS 4&5 ON SHEET C102. REFER TO C.O.P. S.D. P-1230.
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- 36 CONNECT ROOF & OVERFLOW LEADERS TO STORMDRAIN PER ADS DETAIL 1003 IN SHEET C102

SEE ARCHITECTS PLANS FOR ADDITIONAL DIMENSIONS, CONCRETE SCORING AND OTHER PERTINENT INFORMATION.

CAUTION: EXISTING UNDERGROUND FACILITIES WITHIN PROJECT VICINITY, OUTSIDE OF IMMEDIATE PROJECT LIMITS. CONTRACTOR TO CONFIRM LOCATION AND PROTECT IN PLACE

CAUTION: PROPOSED DEMOLITION ABOVE EXISTING COX UTILITIES. PROCEED WITH CAUTION & PROTECT IN PLACE

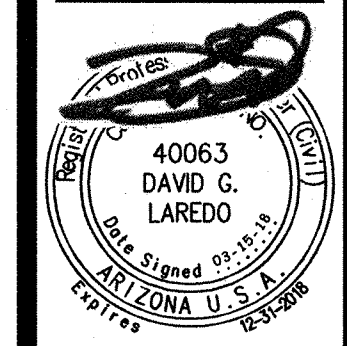


Call before you dig.  
1.800.STAKE.IT  
602.263.1100

Project No. <b>17129</b>	Date <b>03/15/2018</b>	Sheet No. <b>C104</b>
Project Manager <b>D. LAREDO, P.E.</b>	Project Engineer <b>M. WOLF, P.E.</b>	

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4525 E. ST. ANNE AVE.  
PHOENIX, AZ 85042

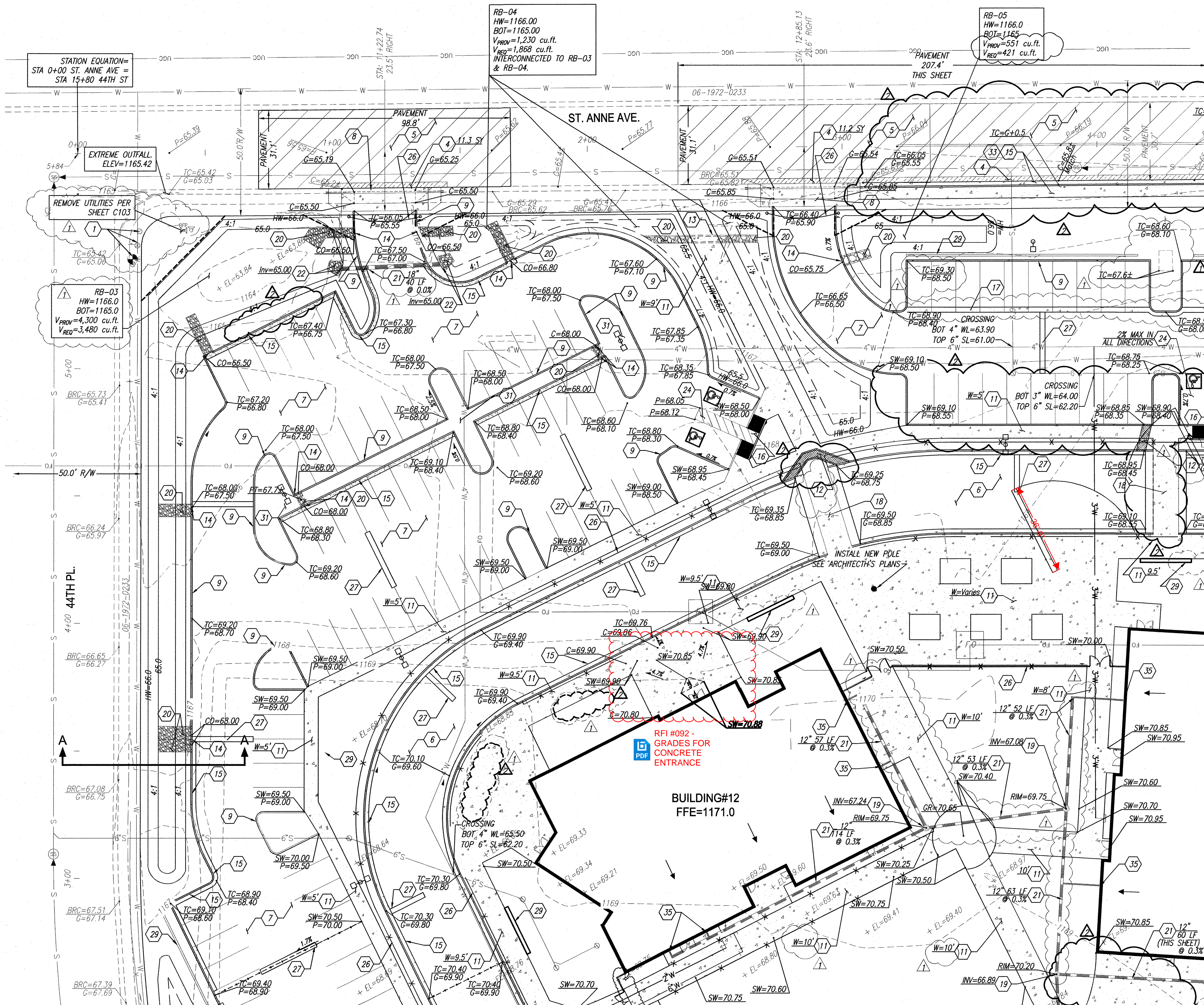


Job No. 1709  
Drawn DL  
Checked MSW  
Date 03/15/18  
Revised

FOR  
CONSTRUCTION

**HDA ARCHITECTS, LLC.**  
459 N. Gilbert Road, Suite C-200, GILBERT, AZ 85234  
TEL: (480) 539 8800 FAX: (480) 539 8608  
Grading Plan  
Grading & Drainage Plan w/Offsite Improvements

**HDA ARCHITECTS, LLC.**  
Sheet No.  
**C104**



MATCH SHEET C105

MATCH SHEET C106





SCALE 1"=20'

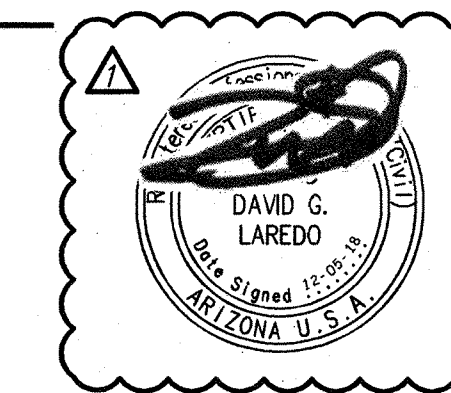
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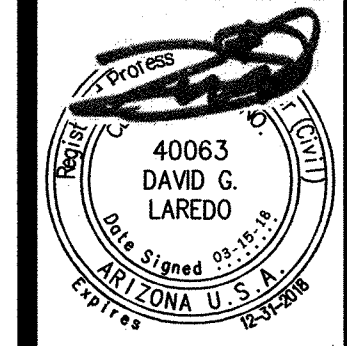
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Project No.	17129	Date	03/15/2018	Sheet No.	C105
Project Manager	D. LAREDO, P.E.	Project Engineer	M. WOLF, P.E.		

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Grading & Drainage Plan w/Offsite Improvements



Sheet No.  
**C105**

PAPP#1705053 KIVA#17-3110





20 0 20 40  
feet  
SCALE 1"=20'

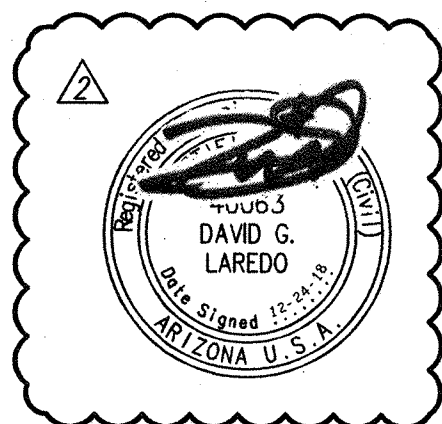
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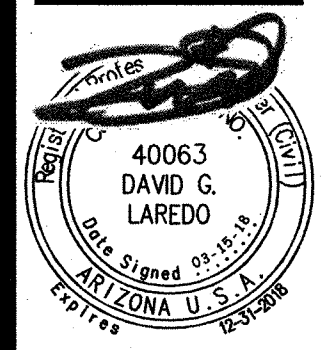
CAUTION: PROPOSED DEMOLITION ABOVE EXISTING COX UTILITIES. PROCEED WITH CAUTION & PROTECT IN PLACE



Project No.	Date	Sheet No.
17129	03/15/2018	C106
Project Manager	Project Engineer	
D. LAREDO, P.E.	M. WOLF, P.E.	

**HUBBARD ENGINEERING**  
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1201 S. Alma School Rd., Ste. 12000 - Mesa, AZ 85210  
Ph: 480.892.3313

ADDITIONS AND RENOVATIONS TO  
NEVITT ELEMENTARY SCHOOL  
TEMPE ELEMENTARY SCHOOL DISTRICT NO. 3  
4525 E. ST. ANNE AVE.  
PHOENIX, AZ. 85042



Job No. 1709  
Drawn DL  
Checked MSW  
Date 03/15/18  
Revised

FOR  
CONSTRUCTION

HDA ARCHITECTS, LLC.  
459 N. Gilbert Road, Suite C-200, GILBERT, AZ 85234  
TEL: (480) 539 8800 FAX: (480) 539 8808  
Grading Plan  
Grading & Drainage Plan w/Offsite Improvements



Sheet No.  
C106

PAPP#1705053 KIVA#17-3110





20 0 20 40  
feet  
SCALE 1"=20'

### GRADING NOTES:

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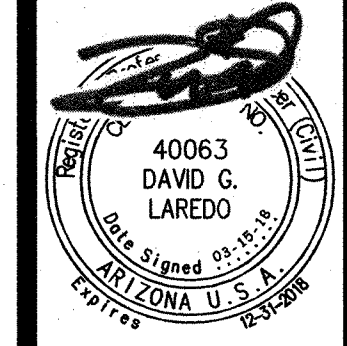
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**811**  
Call before you dig.  
1.800.STAKE.IT  
602.263.1100

Project No. <b>17129</b>	Date <b>03/15/2018</b>	Sheet No. <b>C107</b>
Project Manager <b>D. LAREDO, P.E.</b>	Project Engineer <b>M. WOLF, P.E.</b>	

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PHOENIX, AZ 85042



Job No. 1709  
Drawn DL  
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Revised

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CONSTRUCTION

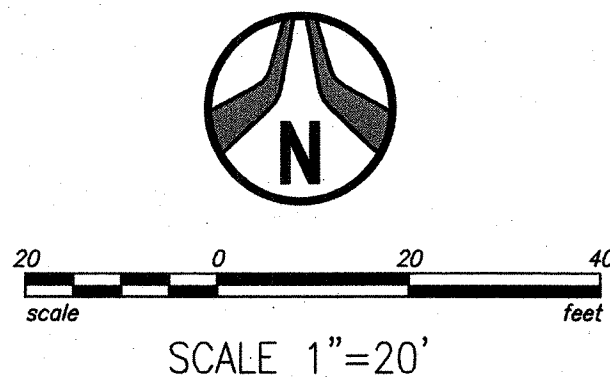
**HDA ARCHITECTS, LLC.**  
459 N. Gilbert Road, Suite C-200, GILBERT, AZ 85234  
TEL: (480) 539 8800 FAX: (480) 539 8608  
Grading Plan  
Grading & Drainage Plan w/Offsite Improvements

**HDA ARCHITECTS, LLC.**  
Sheet No.  
**C107**

PAPP#1705053 KIVA#17-3110



NEVITT ELEMENTARY SCHOOL  
PHOENIX, AZ. 85042  
GRADING PLAN



GRADING NOTES:

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**\*\*CAUTION\*\***  
AERIAL FACILITIES WITHIN PROJECT LIMITS.  
PROTECT IN PLACE - PROCEED WITH CAUTION

CAUTION: PROPOSED CONSTRUCTION UNDER COX AERIAL FACILITIES

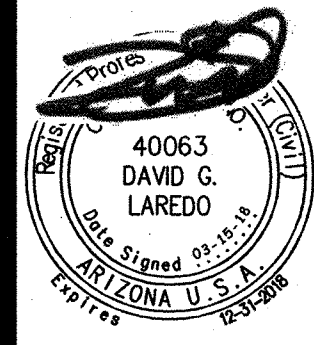
GENERAL REVISIONS TO CIVIL IMPROVEMENTS INCLUDING STORM DRAIN, UTILITIES, SITE LAYOUT, SIDEWALKS, UPDATING NOTES, AND ADDING CONFLICT AND CROSSING CALLOUTS

40063  
DAVID G. LAREDO  
ARIZONA U.S.A.  
Date Signed 03/15/18

Project No.	Date	Sheet No.
17129	03/15/2018	C108
Project Manager	Project Engineer	
D. LAREDO, P.E.	M. WOLF, P.E.	

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Drawn	DL
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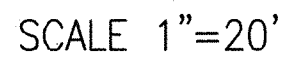
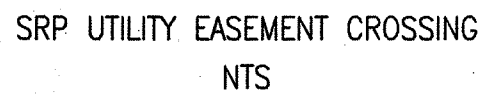
FOR  
CONSTRUCTION

HDA ARCHITECTS, LLC.  
459 N. Gilbert Road, Suite C-200, GILBERT, AZ 85234  
TEL: (480) 539 8800 FAX: (480) 539 8608  
Grading Plan w/Offsite Improvements  
Grading & Drainage Plan



Sheet No.  
C108


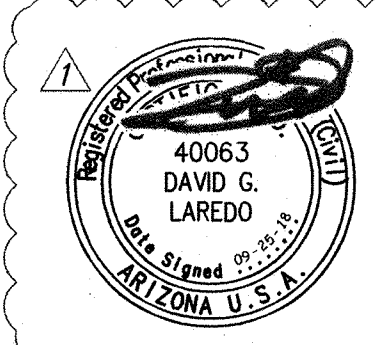




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**CAUTION: PROPOSED CONSTRUCTION UNDER  
COX AERIAL FACILITIES**



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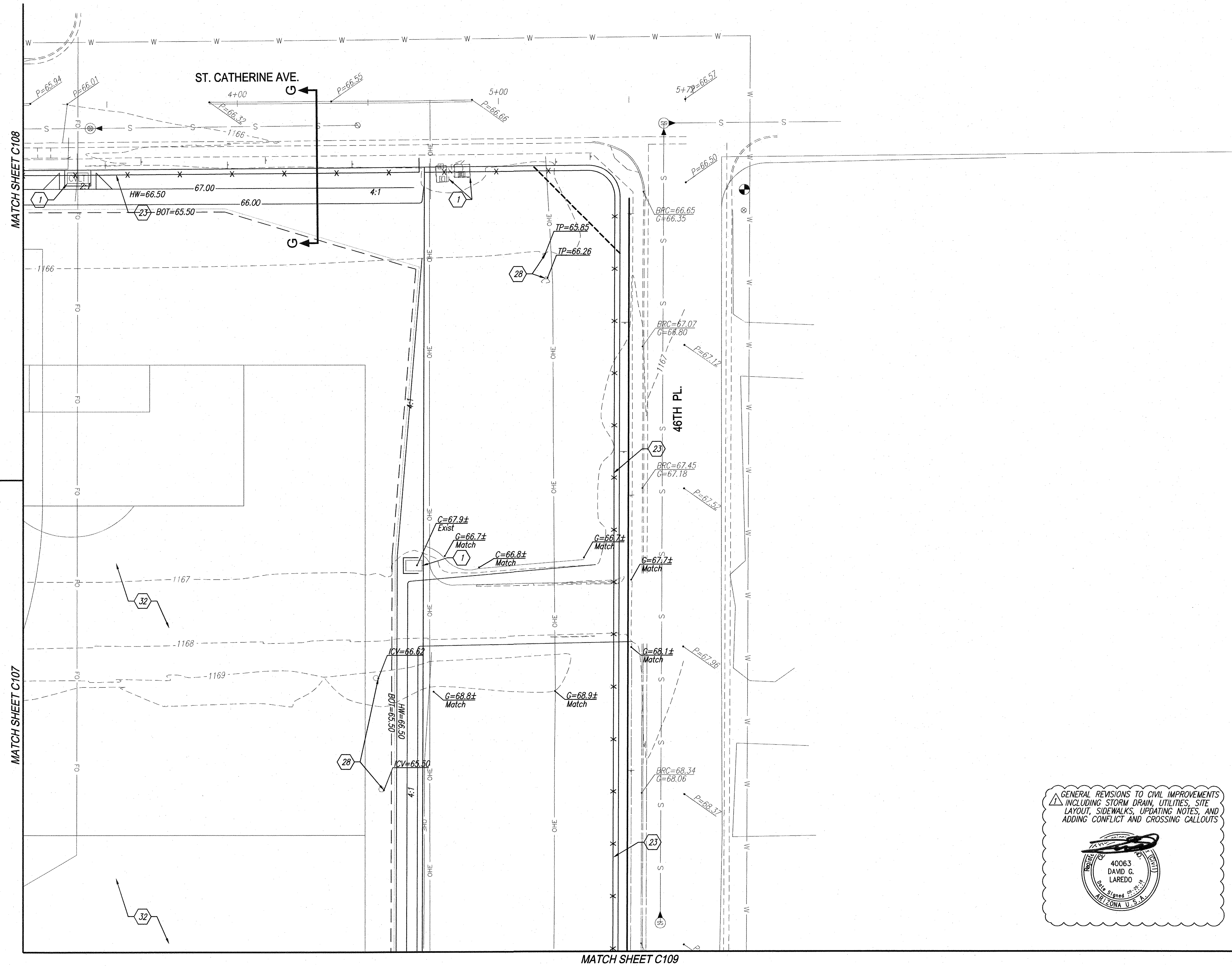
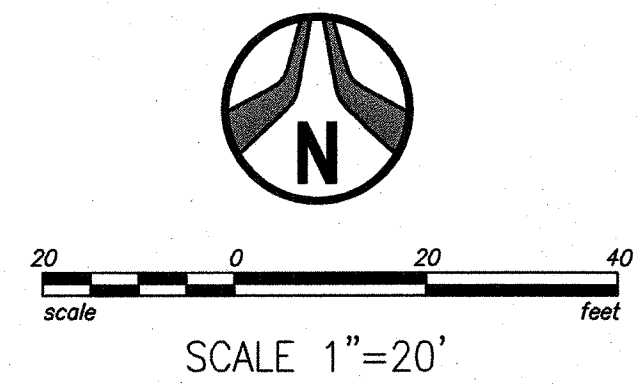
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# HDA

HDA ARCHITECTS, LLC.

Sheet No.  
C109





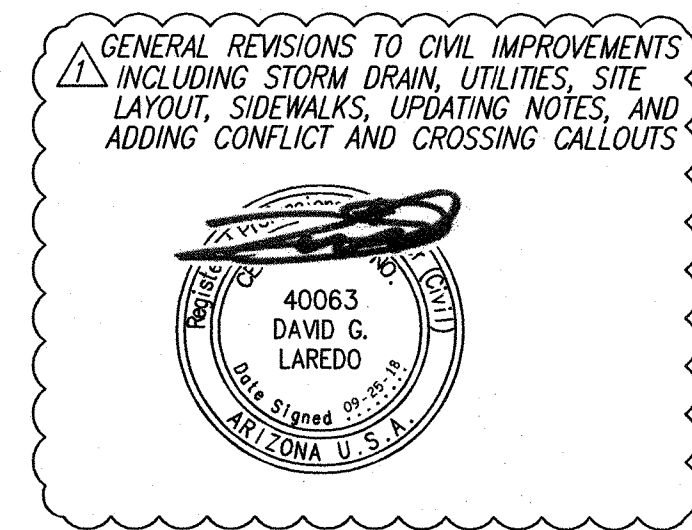
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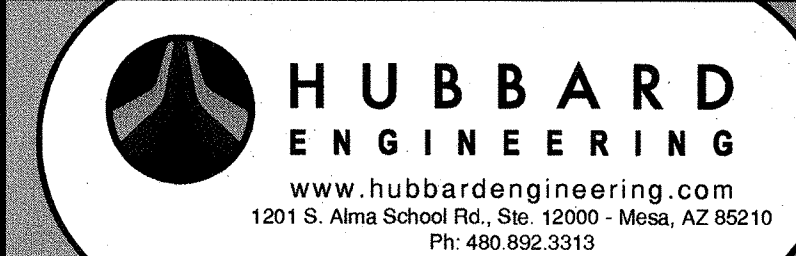
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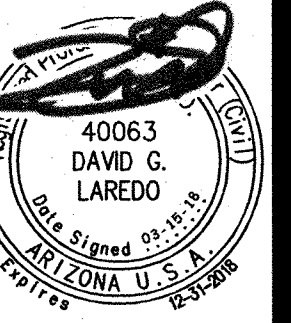
CAUTION: COX FACILITIES (VAULTS, HANDHOLE, MANHOLES, AND/OR SURFACE MOUNTS) WITHIN PROJECT VICINITY BUT OUTSIDE OF IMMEDIATE CONSTRUCTION AREA. PROTECT IN PLACE



Project No.	Date	Sheet No.
17129	03/15/2018	C110
Project Manager	Project Engineer	
D. LAREDO, P.E.	M. WOLF, P.E.	



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