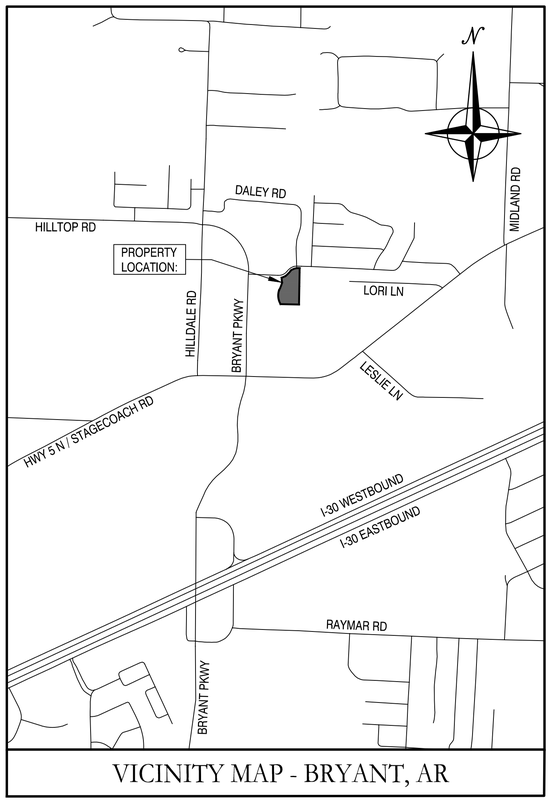
A NEW ELITE VOLLEYBALL ACADEMY GYM FOR JOHN ECKART VERNIA OFFICE PARK 1601 CHRISTY LANE ALEXANDER, ARKANSAS 72002



VICINITY MAP - BRYANT, AR

Prepared by:

GarNat Engineering, LLC

Designing our client's success

www.garnatengineering.com

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Benton, AR 72018
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Bryant, AR 72022
Fx (888) 900-3068



ARKANSAS



03-13-2023



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1. SAFETY

1.1. JOBSITE SAFETY IS THE SOLE AND EXCLUSIVE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

1.2. THIS RESPONSIBILITY COVERS THEIR OWN WORK FORCE, ALL SUBCONTRACTORS, VISITING PERSONNEL, OFFICIALS, AND THE GENERAL PUBLIC WHICH MAY HAVE ACCESS TO THE JOBSITE.

1.3. THE CONTRACTOR SHALL EXERCISE COMPLETE CONTROL OVER WHO HAS ACCESS TO THE JOBSITE TO ENSURE JOBSITE SAFETY.

1.4. THE CONTRACTOR SHALL CONFORM TO ALL SECURITY AND SAFETY REQUIREMENTS OF THE OWNER.

1.5. ANY SAFETY OR OTHER TRAINING REQUIRED BY THE OWNER FOR THE WORK FORCE MUST BE PROVIDED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

2. PERMITS

2.1. CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS AS REQUIRED BY REGULATING AUTHORITIES OR BY THE OWNER. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE TERMS AND CONDITIONS ASSOCIATED WITH EACH REQUIRED PERMIT, AS WELL AS ADHERING TO THE RULES AND REGULATIONS OF EACH REGULATING AUTHORITY

3. CONTRACT DOCUMENTS

3.1. ALL WORK SHALL CONFORM TO THE PLANS, THESE NOTES, AND SPECIFICATIONS IN ALL RESPECTS AND SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.

4. INDEMNITY

4.1. BY ACCEPTING THE CONTRACT FOR THIS WORK, THE CONTRACTOR, AT THEIR OWN EXPENSE AND RISK, HEREBY RELEASES AND AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS THE OWNER, GARNAT ENGINEERING, THEIR OFFICERS, AGENTS, EMPLOYEES, CONSULTANTS, AND REPRESENTATIVES FOR DAMAGE TO THE PROPERTY OR INJURY TO, OR DEATH, OF ANY PERSONS, FROM ANY AND ALL CLAIMS, DEMANDS, ACTIONS OF ANY KIND WHATSOEVER ARISING OUT OF AND IN CONNECTION WITH THE AGREEMENT OR PROSECUTION OF WORK UNDER IT, WHETHER SUCH CLAIMS, DEMANDS, ACTIONS, OR LIABILITY ARE CAUSED BY THE CONTRACTOR, IT'S AGENTS, EMPLOYEES, SUBCONTRACTORS, PRODUCTS INSTALLED ON THE PROJECT OR CAUSED BY ANY OTHER PARTY.

5. CONSTRUCTION PROCEDURES, MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING STANDARDS UNLESS OTHERWISE MODIFIED ON THE DRAWINGS OR IN THESE NOTES OR SPECIFICATIONS.

5.1. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION - ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT

5.2. INTERNATIONAL BUILDING CODE

5.3. ACI 315 MANUAL OF STANDARD PRACTICES FOR DETAILING REINFORCED CONCRETE STRUCTURES

5.4. CRSI RECOMMENDED PRACTICE FOR PLACING REINFORCING STEEL.

5.5. CITY OF BRYANT STANDARD SPECIFICATIONS.

5.6. LATEST EDITIONS OF AWWA, ASTM, ADH, AND TEN STATES STANDARDS.

6. SITE

6.1. CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTION OF ALL PROPERTY CORNERS.

6.2. CONTRACTOR IS NOT TO PERFORM WORK BEYOND THE DESIGNATED WORK LIMITS WITHOUT FIRST OBTAINING WRITTEN AUTHORIZATION FROM THE PROJECT ENGINEER OR OWNER.

6.3. CONTRACTOR IS RESPONSIBLE FOR REPAIRING THE DAMAGE DONE TO ANY EXISTING ITEM DURING CONSTRUCTION SUCH AS BUT NOT LIMITED TO: DRAINAGE, UTILITIES, PAVEMENT, STRIPING, CURB, ETC. REPAIRS SHALL BE EQUAL TO, OR BETTER THAN EXISTING CONDITIONS.

6.4. CONTRACTOR TO REMOVE OR RELOCATE, WHEN APPLICABLE, ALL ITEMS, SHOWN TO BE REMOVED OR RELOCATED AND NOT SHOWN WITHIN CONSTRUCTION LIMITS AND WHERE REQUIRED TO ALLOW FOR NEW CONSTRUCTION AS SHOWN.

6.5. CONTRACTOR TO ADJUST ALL EXISTING AND PROPOSED MANHOLES, VALVE BOXES, ETC. TO FINISH GRADE, WHERE REQUIRED.

7. STRUCTURES

7.1. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT IN TO INVERT OUT.

7.2. BEDDING FOR STORM STRUCTURES SHALL CONSIST OF A MINIMUM OF 6-INCHES OF COMPACTED #57 STONE ON TOP OF COMPACTED SUBGRADE.

7.3. AREAS EXPOSED BY EXCAVATION OR STRIPPING AND ON WHICH SUBGRADE PREPARATIONS ARE TO BE PERFORMED SHALL BE SCARIFIED TO MINIMUM DEPTH OF 0'-8" AND COMPACTED TO MINIMUM OF 95% OPTIMUM DENSITY. ANY AREAS THAT FAIL COMPACTION ARE TO BE STABLIZED AS DIRECTED BY THE ENGINEER.

8. PRIOR TO PLACING FILL IN LOW AREAS, SUCH AS PREVIOUSLY EXISTING CREEKS, PONDS, OR LAKES, PERFORM FOLLOWING PROCEDURES:

8.1. DRAIN WATER OUT BY GRAVITY WITH DITCH HAVING FLOW LINE LOWER THAN LOWEST ELEVATION IN LOW AREA. IF DRAINAGE CANNOT BE PERFORMED BY GRAVITY DITCH, USE ADEQUATE PUMP TO OBTAIN THE SAME RESULTS.

8.2. AFTER DRAINAGE OF LOW AREA IS COMPLETE, REMOVE MULCH, MUD DEBRIS, AND OTHER UNSUITABLE MATERIAL BY USING ACCEPTABLE EQUIPMENT AND METHODS THAT WILL KEEP NATURAL SOILS UNDERLYING LOW AREA DRY AND UNDISTURBED.

9. UTILITIES

9.1. AN ATTEMPT HAS BEEN MADE TO APPROXIMATELY LOCATE UTILITIES ON THE DRAWINGS.

9.2. UTILITIES SHOWN ON THE DRAWINGS WERE LOCATED BY VISUAL OBSERVATION, AND BY TRANSCRIBING FROM RECORD MAPS AND PLANS.

9.3. NO EXCAVATIONS WERE MADE TO CONFIRM SUB-SURFACE UTILITIES. NEITHER THE SURVEYOR NOR PROJECT ENGINEER GUARANTEES THAT ALL UTILITIES HAVE BEEN SHOWN, OR THAT THOSE SHOWN ARE FULLY ACCURATE.

9.4. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADJUSTMENTS AND/OR RELOCATION OF EXISTING UTILITIES THAT ARE DAMAGED AS A RESULT OF WORK OF THIS PROJECT.

9.5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PROPERLY DISCONNECTING, ABANDONING, RELOCATING, AND/OR ADJUSTING ALL AFFECTED UTILITIES WITHIN THE PROJECT AREA.

9.6. ALL UTILITY WORK SHALL BE COORDINATED AND EXECUTED IN ACCORDANCE WITH THE OWNER AND/OR GOVERNING UTILITY COMPANY CODES, SPECIFICATIONS, STANDARDS, AND REQUIREMENTS.

9.7. DESIGN AND ALIGNMENT OF UNDERGROUND TELEPHONE, TV CABLE, GAS AND ELECTRIC SERVICES SHALL BE PROVIDED BY THE INDIVIDUAL UTILITIES AND ARE NOT NECESSARILY SHOWN WITH THESE PLANS. CONTRACTOR SHALL PROVIDE CONDUITS SIZED TO ACCOMMODATE UTILITY ROUTING WITH PULL STRINGS WHERE NECESSARY.

9.8. CONTRACTOR TO PROVIDE ALL NECESSARY APPURTENANCES NECESSARY FOR COMPLETE UTILITY SERVICES WHICH ARE NOT PROVIDED BY THE UTILITY COMPANY.

10. DISPOSAL OF DEBRIS, WASTE OR SPOIL

10.1. BURNING OF DEBRIS AND WASTE IS NOT ALLOWED. CONTRACTOR MAY BE REQUIRED TO PROPERLY HAUL AWAY AND DISPOSE OF ANY WASTE MATERIAL REMOVED FROM THE SITE.

10.2. ANY WASTE OR SPOIL MATERIAL WHICH IS EXCAVATED FROM THE JOB SITE IS TO BE DISPOSED OF AS DIRECTED BY THE ENGINEER OR OWNER.

10.3. REMOVAL AND DISPOSAL OF EXCAVATED WASTE MATERIAL IS CONSIDERED SUBSIDIARY TO ALL OTHER ITEMS IN THE PROJECT, AND WILL NOT BE PAID FOR SEPARATELY.

10.4. CONTRACTOR SHALL FOLLOW ALL LOCAL, STATE AND FEDERAL REGULATIONS IN DISPOSING OF DEMOLISHED MATERIAL REMOVED FROM THIS SITE.

10.5. CONTRACTOR SHALL REMOVE FROM SITE AND DISPOSE OF MATERIAL ENCOUNTERED IN GRADING OPERATIONS THAT, IN OPINION OF THE ENGINEER, IS UNSUITABLE OR UNDESIRABLE FOR BACKFILLING OR SUBGRADE PURPOSES. DISPOSE OF IN A MANNER SATISFACTORY TO ENGINEER. BACKFILL UNDERCUT AREAS WITH LAYERS OF SUITABLE MATERIAL AND COMPACT AS SPECIFIED HEREIN.

11. SUBSTITUTIONS

11.1. SUBSTITUTIONS ARE NOT ALLOWED WITHOUT PRIOR APPROVAL FROM THE PROJECT ENGINEER.

12. ENVIRONMENTAL

12.1. THE CONTRACTOR IS TO MEET ALL ENVIRONMENTAL REQUIREMENTS OF THE OWNER AND ANY REGULATORY AGENCY HAVING AUTHORITY OVER THIS SITE.

12.2. THE CONTRACTOR IS TO UTILIZE BEST MANAGEMENT PRACTICES (BMP'S) FOR CONTROL OF EROSION DURING ALL CONSTRUCTION PHASES OF THIS PROJECT.

12.3. MININUM BMP'S REQUIRED FOR THE PROJECT ARE LISTED ON SHEET THESE PLANS. CONTRACTOR SHALL PROVIDE THESE BMP'S AND ANY OTHERS REQUIRED FOR THE PROJECT.

12.4. IF A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED FOR THE CONSTRUCTION PHASE OF THIS PROJECT, THE CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS FOR EROSION CONTROL INCLUDED IN THE SWPPP DOCUMENTS.

12.5. CONTRACTOR SHALL KEEP WORK AREA CLEAN AND FREE OF ACCUMULATED TRASH AND DEBRIS. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING MEASURES TO AVOID TRACKING OF MUD, DIRT, ROCKS, AND DEBRIS ONTO AREAS OUTSIDE THE PROJECT AREA. CONTRACTOR SHALL CLEAN PAVEMENTS WHEN NECESSARY OR AS OTHERWISE DIRECTED, AND SHALL CONTROL DUST BY SWEEPING AND WATERING AS NEEDED. DE-TRACKING MAY BE REQUIRED AT ALL ENTRANCES.

13. FINAL SITE CONDITIONS

13.1. ALL DISTURBED AREAS NOT RECEIVING PAVEMENT OR LANDSCAPING SHALL HAVE VEGETATION ESTABLISHED AT TIME OF FINAL INSPECTION.

13.2. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPE 2H:1V OR STEEPER UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.

13.3. ALL CUT OR FILL SLOPES SHALL BE 3H:1V OR FLATTER UNLESS OTHERWISE NOTED.

13.4. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS

13.5. UPON PARTIAL OR FINAL COMPLETION OF GRADING WORK, SPREAD TOPSOIL, SEED, FERTILIZER, AND MULCH IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE STORM WATER POLLUTION PREVENTION PLAN.

BY	REVISION	DATE

GNE Designing our client's success

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Bryant, AR 72022
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A NEW ELITE VOLLEYBALL ACADEMY
GYM FOR JOHN ECKART
VERNIA OFFICE PARK
1601 CHRISTY LANE
ALEXANDER, ARKANSAS 72002

STATE OF ARKANSAS
VERNON J. WILLIAMS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551

03-13-2023

CONTENTS:

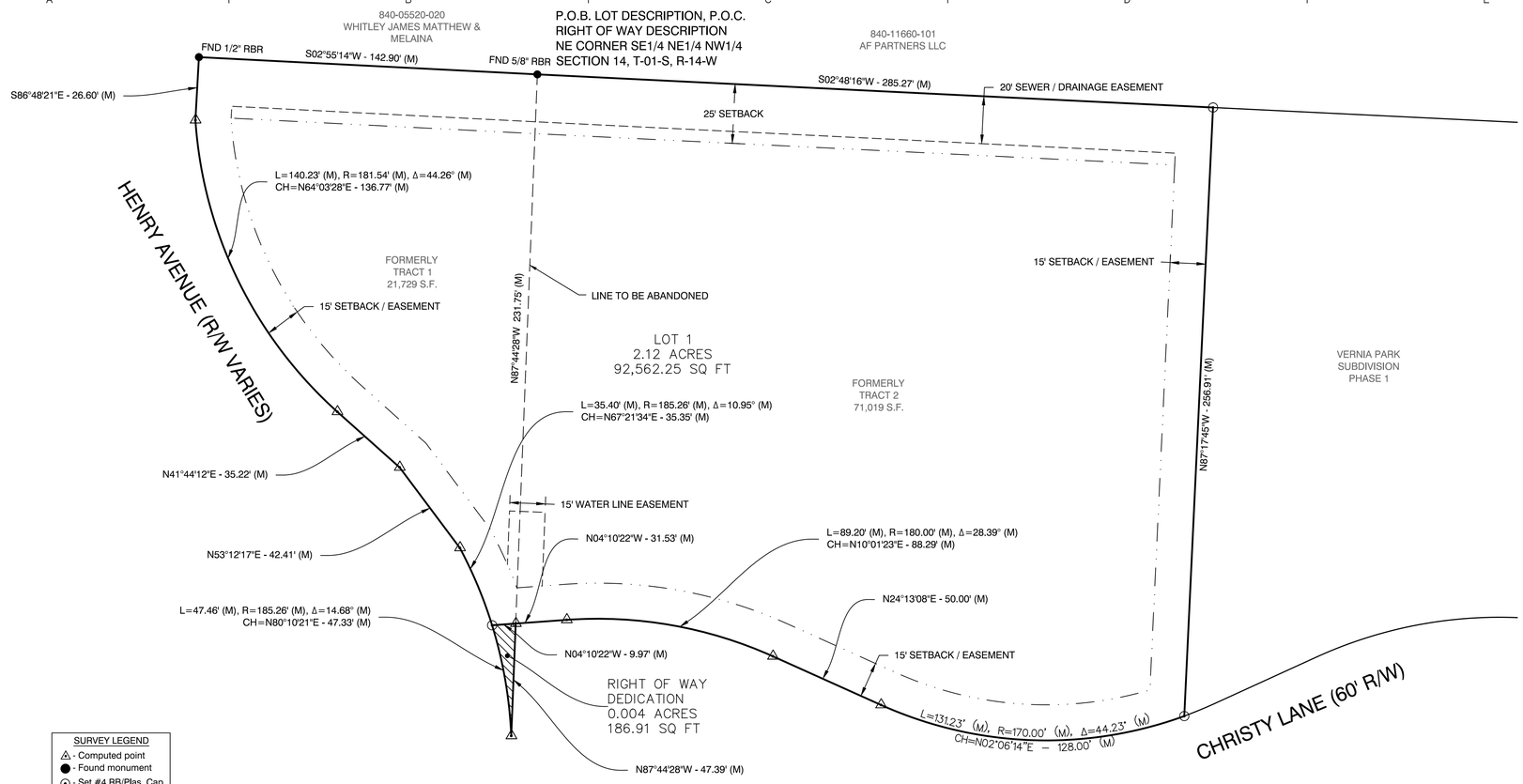
GENERAL NOTES

PROJECT NO: 20022

DATE: FEB. 8, 2023

SHEET NO: G1.0

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SURVEY LEGEND
- △ - Computed point
- ● - Found monument
- ⊙ - Set #4 RB/Plas. Cap
- (M)-Measured
- (R)-Record
- (P)-Platted

VERNIA PARK NORTHEAST SUBDIVISION PHASE 1 FINAL PLAT

PLAT CERTIFICATES:

OWNER:

Name: EVA Real Estate, LLC

Address: P.O. Box 241273, Little Rock, AR 72223

DEVELOPER:

Name: EVA Real Estate, LLC

Address: P.O. Box 241273, Little Rock, AR 72223

CERTIFICATE OF OWNER:

We, the undersigned, owners of the real estate shown and described herein do hereby certify that we have laid off, platted and subdivided, and do hereby lay off, plat and subdivide said real estate in accordance with the within plat.

Date: _____ Signed: _____
Tanja Eckart
EVA Real Estate, LLC

Source of Title: SALINE COUNTY, ARKANSAS
Saline County Document# _____

CERTIFICATE OF ENGINEERING ACCURACY:

I, Vernon J. Williams, hereby certify that this plat correctly represents a survey and a plan made by me or under my supervision; that all monuments shown hereon actually exist and their locations, size, type, and material are correctly shown; and that all requirements of the City of Bryant Subdivision Rules and Regulations have been fully complied with.

Date: _____ Signed: _____
Vernon J. Williams
Registered Professional Engineer
No. 9551, Arkansas

CERTIFICATE OF RECORDING: _____

CERTIFICATE OF SURVEYING ACCURACY:

I, George P. Wooden, hereby certify that this plat correctly represents a boundary survey made by me or under my supervision; that the boundary lines shown hereon correspond with the description in the deeds cited in the above Source of Title; and that all monuments which were found or placed on the property are correctly described and located.

Date: _____ Signed: _____
George P. Wooden
Registered Land Surveyor
No. 1573, Arkansas

CERTIFICATE OF FINAL PLAT APPROVAL:

Pursuant to the City of Bryant Subdivision Rules and Regulations, this document was given approval by the Bryant Planning Commission. All of the document is hereby accepted, and this certificate executed under the authority of said rules and regulations.

Date: _____ Signed: _____
Rick Johnson, Chairman
Bryant Planning Commission

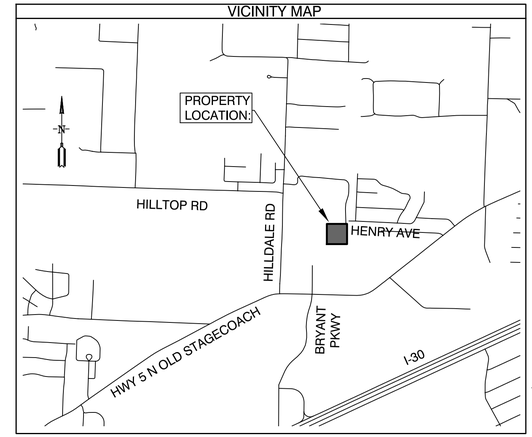
30' 15' 0 30'

SURVEY PLAT CODE:
500-01S-14W-0-14-410-62-1573

STATE OF ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
NO. 9551
VERNON J. WILLIAMS
DRAFT

CERTIFICATE OF AUTHORIZATION
GarNat Engineering, LLC.
No. 2174
ARKANSAS

VICINITY MAP



PROPERTY DESCRIPTION:

LOT 1 - 2.12 ACRES (92,562 SQUARE FEET)

PART OF THE SOUTHEAST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (SE1/4 NE1/4 NW1/4) AND PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (NE1/4 NE1/4 NW1/4) ALL IN SECTION 14, TOWNSHIP 01 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: **BEGINNING** AT A FOUND 5/8" REBAR FOR THE NORTHEAST CORNER OF THE SAID SE1/4 NE1/4 NW1/4; THENCE S 02°48'16" W, ALONG THE EAST LINE OF SAID SE1/4 NE1/4 NW1/4, FOR A DISTANCE OF 285.27 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE N 87°17'45" W, LEAVING SAID EAST LINE, A DISTANCE OF 256.91 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED ON THE EAST RIGHT OF WAY LINE OF CHRISTY LANE; THENCE ALONG THE SAID EAST RIGHT OF WAY THE FOLLOWING CALLS: THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 170 FEET AND A LENGTH OF 131.23 FEET, WHOSE CHORD BEARS N 02°06'14" E - 128.00 FEET, THENCE N 24°13'08" E - 50.00 FEET, THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 180 FEET AND A LENGTH OF 89.20 FEET, WHOSE CHORD BEARS N 10°01'23" E - 88.29 FEET, THENCE N 04°10'22" W - 31.53 FEET TO A SET 1/2" REBAR WITH CAP #1573 LOCATED AT THE INTERSECTION WITH THE SOUTH RIGHT OF WAY OF HENRY AVENUE; THENCE ALONG THE SAID SOUTH RIGHT OF WAY THE FOLLOWING CALLS: THENCE ALONG A CURVE TO THE LEFT WITH A RADIUS OF 185.26 FEET AND A LENGTH OF 35.40 FEET, WHOSE CHORD BEARS N 67°21'34"E - 35.35 FEET, THENCE N 53°12'17" E - 42.41 FEET, THENCE N 41°44'12" E - 35.22 FEET, THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 181.54 FEET AND A LENGTH OF 140.23 FEET, WHOSE CHORD BEARS N 64°03'28" E - 136.77 FEET, THENCE S 86°48'21" E - 26.60 FEET TO A FOUND 1/2" REBAR LOCATED ON THE EAST LINE OF THE SAID NE1/4 NE1/4 NW1/4; THENCE S 02°55'14" W, LEAVING SAID SOUTH RIGHT OF WAY OF HENRY AVENUE AND ALONG THE EAST LINE OF THE SAID NE1/4 NE1/4 NW1/4 FOR A DISTANCE OF 142.90 FEET TO THE **POINT OF BEGINNING**, CONTAINING 2.12 ACRES, MORE OR LESS. SUBJECT TO ANY EASEMENTS OF RECORD AND THE RIGHTS OF WAY OF HENRY AVENUE AND CHRISTY LANE. LESS AND EXCEPT RIGHT OF WAY DEDICATION BELOW.

RIGHT OF WAY DEDICATION - 0.004 ACRES (187 SQUARE FEET)

PART OF THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER (NE1/4 NE1/4 NW1/4) SECTION 14, TOWNSHIP 01 SOUTH, RANGE 14 WEST, SALINE COUNTY, ARKANSAS, MORE PARTICULARLY DESCRIBED AS FOLLOWS: **COMMENCING** AT A FOUND 5/8" REBAR FOR THE SOUTHEAST CORNER OF THE SAID NE1/4 NE1/4 NW1/4; THENCE N 87°44'28" W, ALONG THE SOUTH LINE OF SAID NE1/4 NE1/4 NW1/4, FOR A DISTANCE OF 231.75 FEET TO A COMPUTED POINT ON THE EAST RIGHT OF WAY OF CHRISTY LANE FOR THE **POINT OF BEGINNING**; THENCE CONTINUING N 87°44'28" W, ALONG SAID SOUTH LINE, A DISTANCE OF 47.39 FEET TO A POINT OF INTERSECTION WITH THE SOUTH RIGHT OF WAY OF HENRY AVENUE; THENCE ALONG SAID SOUTH RIGHT OF WAY AND A CURVE TO THE LEFT WITH A RADIUS OF 185.26 FEET AND A LENGTH OF 47.46 FEET, WHOSE CHORD BEARS N 80°10'21" E - 47.33 FEET TO A SET 1/2" REBAR WITH CAP #1573; THENCE S 04°10'22" E, LEAVING SAID SOUTH RIGHT OF WAY OF HENRY AVENUE FOR A DISTANCE OF 9.97 FEET TO THE **POINT OF BEGINNING**, CONTAINING 0.004 ACRES (187 SQUARE FEET), MORE OR LESS.

PROPERTY SPECIFICATIONS:

ZONING CLASSIFICATION: C-2

SOURCE OF WATER: CITY OF BRYANT
SOURCE OF SEWER: CITY OF BRYANT

BUILDING SETBACKS (SB):
FRONT - 15'
REAR - 25'
INTERIOR (SIDE) - 15' UNLESS OTHERWISE NOTED
EXTERIOR - 15'

LOT CORNERS: SET #4 REBAR WITH CAP

DOCUMENTS USED:

- VERNIA PARK SUBDIVISION PHASE 1 FINAL PLAT BY ZANE ROBBINS PLS #1853

BASIS OF BEARINGS:

BENCHMARK(S) PROVIDED ARE REBAR AND COORDINATES ON BENCHMARKS ARE NORTH AMERICAN DATUM 1983, ARKANSAS SOUTH ZONE, US SURVEY FEET, GRID COORDINATES AND ELEVATIONS ARE NAVD 1988. COORDINATES AND ELEVATIONS WERE ESTABLISHED USING GPS AND WERE PROCESSED USING THE NATIONAL GEODETIC SURVEY'S "ONLINE POSITIONING USER SERVICE" (OPUS).

CERTIFICATIONS:

BY AFFIXING MY SEAL AND SIGNATURE, I GEORGE P. WOODEN, PS NO.1573, HEREBY CERTIFY THAT THIS DRAWING CORRECTLY DEPICTS A SURVEY COMPILED UNDER MY SUPERVISION ON MARCH 10, 2023.

THIS SURVEY WAS BASED ON LEGAL DESCRIPTIONS AND TITLE WORK FURNISHED BY OTHERS AND DOES NOT REPRESENT A TITLE SEARCH.

THIS PROPERTY IS NOT LOCATED IN THE 100 YEAR FLOOD PLAIN. THE PROPERTY SHOWN ON THIS PLAT IS LOCATED IN ZONE "X" OF THE F.E.M.A. MAP PANEL 05125C0240E EFFECTIVE DATE JUNE 05, 2020.

BY	REVISION	DATE

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Ph (501) 408-4650
garnatengineering@gmail.com

VERNIA PARK NORTHEAST SUBDIVISION PHASE 1
1601 CHRISTY LANE
ALEXANDER, ARKANSAS 72002

REGISTERED PROFESSIONAL SURVEYOR
STATE OF ARKANSAS
NO. 1573
SIGNATURE
GEORGE P. WOODEN
DRAFT

CONTENTS: FINAL PLAT

PROJECT NO: 22140

DATE: MARCH 10, 2023

SHEET NO: V1.0

J:\Projects\2022 Projects\22140 Vernia Park\Drawings\Survey\22140-John Eckert-One Lot Subdivision-220323.dwg

PARKING SPACES:
2 HANDICAP SPACES
90 CUSTOMER SPACES
92 PARKING SPACES TOTAL

VOLLEYBALL NETTING SYSTEM

FND 1/2" RBR

FND 5/8" RBR

#6205 Ssmh 9.10 INV RIM ELEV=397.59

#2389 SSMH FL ELEV: 385.46 RIM ELEV=390.28

#2388 SSMH FL ELEV: 390.36 RIM ELEV=394.62

25' SETBACK

20' SEWER / DRAINAGE EASEMENT

STORM DRAIN BOX (TYP.) SEE SHEET C3.0

25' SETBACK - UTILITY - DRAINAGE EASEMENT

70' DETENTION AREA ESMT.

5' WIDE STAIR WITH RAILING (7 STEPS)

BUILDING FINISH FLOOR = 400
21,225 SQUARE FEET

ARDOT STANDARD TYPE A CURB

15' SETBACK / EASEMENT

6.5' WIDE WALK

SIGN TO DESIGNATE SPOT AS HANDICAP ACCESSIBLE (2 TOTAL)

6.5' WIDE WALK

24'

HENRY AVENUE

15' SETBACK / EASEMENT

CURB 6" TURN DOWN

CURB & ASPH. FLUSH

CURB STOP (TYP.) (4 TOTAL)

15' WATER LINE EASEMENT

CURB & ASPH. FLUSH

CURB 6" TURN DOWN

7' WIDE WALK

PARKING SPACE (TYP.)

9'

18'

24'

SIDEWALK

DETECTABLE WARNING DEVICE

6" INTEGRAL CURB

9' CURB TRANSITION

WHEELCHAIR RAMP (SEE ARDOT DWG WR-1)

5' SIDEWALK

EXISTING PATH

ELECTRIC BOX

#2351 sdmh rim 5.388 Inv RIM ELEV=388.79

#1571 7.02 Inv curb inlet rim RIM ELEV=408.34

BIKE/WALK PATH

15' SETBACK / EASEMENT

REMOVE 5' OF PATH TO INSTALL STORM DRAIN THEN REBUILD AND CONSTRUCT REST OF PATH TO INTERSECTION.

CHRISTY LANE

#1569 curb inlet rim 7.5 Inv RIM ELEV=406.61

INSTALL 48 LF OF MODIFIED CURB

15' WATER LINE EASEMENT

20' 10' 0 20'

LEGEND:

PROPOSED CONCRETE

PROPOSED ASPHALT

EXISTING CONCRETE

NOTES:

1. SITE PAVEMENT MARKINGS SHALL BE 4" WIDE WHITE PAINT (PER ARDOT STANDARD SPECIFICATION SECTION 718)

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON J. WILLIAMS

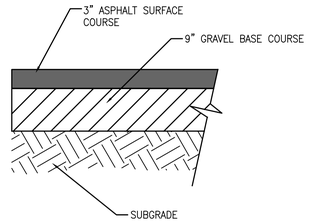
03-13-2023

CONTENTS:
SITE PLAN

PROJECT NO: 22140

DATE: MARCH 13, 2023

SHEET NO: C1.0



ASPHALT PAVING 1

NOT TO SCALE

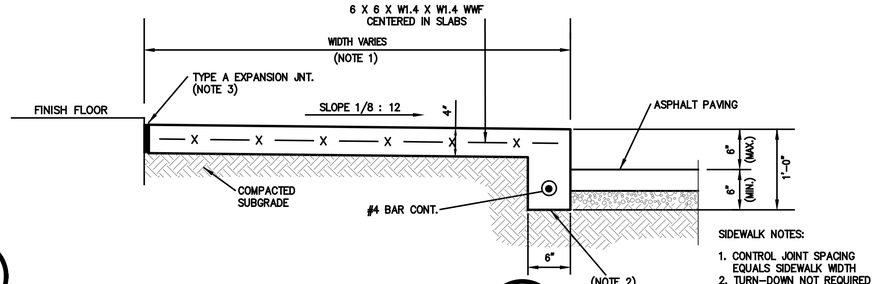
NOTES:

1. ASPHALT SURFACE COURSE SHALL MEET MATERIAL AND INSTALLATION REQUIREMENTS OF SECTION 407 OF AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

2. ASPHALT BINDER COURSE SHALL MEET MATERIAL & INSTALLATION REQUIREMENTS OF SECTION 406 OF AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

3. GRAVEL BASE COURSE SHALL MEET MATERIAL AND INSTALLATION REQUIREMENTS FOR AHTD CLASS 7 AGGREGATE BASE COURSE IN SECTION 303 OF AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

4. SUBGRADE SHALL BE COMPACTED TO A UNIFORM DENSITY OF NOT LESS THAN 95% OF THE MODIFIED PROCTOR.

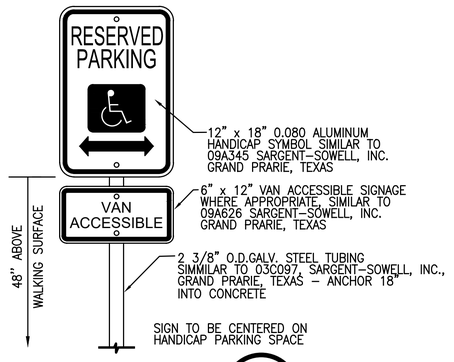


SIDEWALK DETAIL 2

NOT TO SCALE

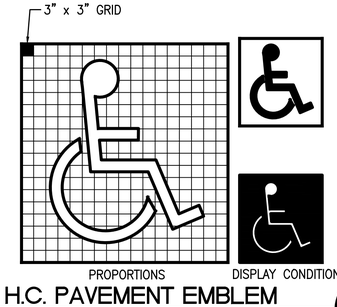
SIDEWALK NOTES:

1. CONTROL JOINT SPACING EQUALS SIDEWALK WIDTH
2. TURN-DOWN NOT REQUIRED WHERE SIDEWALK MATCHES SURROUNDING GRADE
3. EXPANSION JOINT REQUIRED AT ALL ADJACENT CONCRETE. NOT REQUIRED AT ASPHALT PAVING OR SOIL



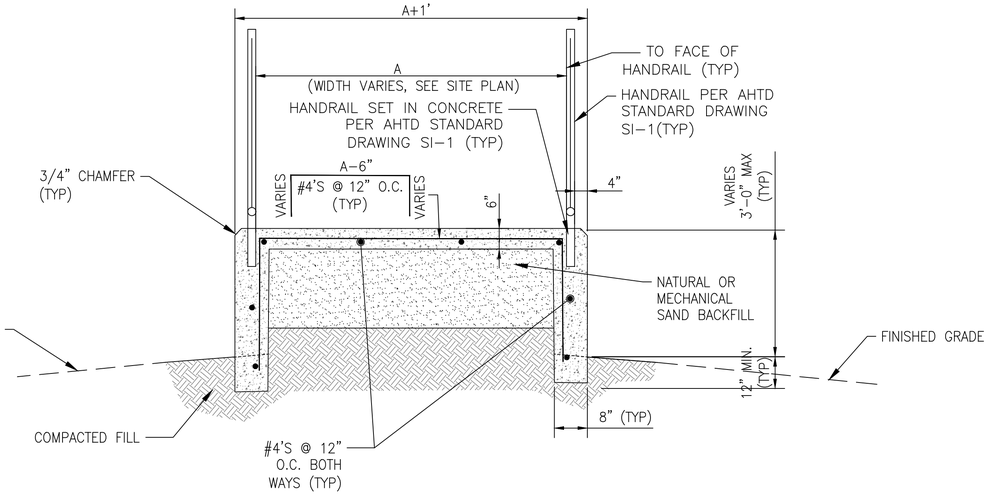
TYP. H.C. SIGN 3

NOT TO SCALE



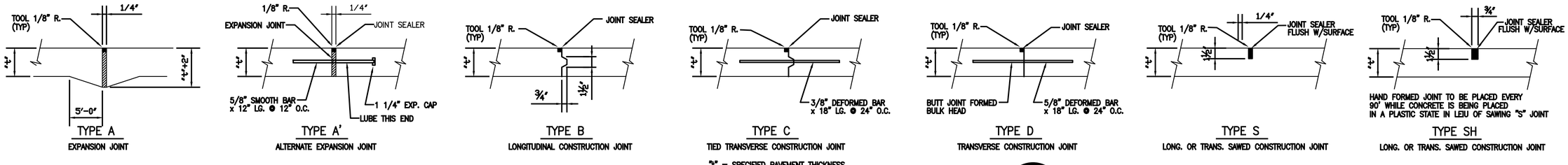
H.C. PAVEMENT EMBLEM 4

NOT TO SCALE



RAISED SIDEWALK WITH HANDRAILS 5

NOT TO SCALE



"t" = SPECIFIED PAVEMENT THICKNESS

CONCRETE JOINTING DETAILS 6

NOT TO SCALE

NOTE: ALL JOINT SPACING NOT TO EXCEED 15'-0" INTERVALS

BY	REVISION	DATE

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FOR JOHN ECKART
VERNIA OFFICE PARK
1601 CHRISTY LANE
ALEXANDER, ARKANSAS 72002

STATE OF ARKANSAS
Vernon ★★★ Williams
REGISTERED PROFESSIONAL ENGINEER
★★★ NO. 9551
VERNON J. WILLIAMS

03-10-2023

CONTENTS:
SITE DETAILS

PROJECT NO: 22140

DATE: MAR 2023

SHEET NO: C1.1

FND 1/2" RBR

FND 5/8" RBR

#6205
Ssmh 9.10 INV
RIM ELEV=397.59

#2389
SSMH FL ELEV: 385.46
RIM ELEV=390.28

#2388
SSMH FL ELEV: 390.36
RIM ELEV=394.62

25' SETBACK

20' SEWER / DRAINAGE EASEMENT

CUT-IN 8" X 6" WYE
EXTEND SEWER SERVICE
TO BUILDING

6" SCH 40 SEWER SERVICE

25' SETBACK - UTILITY -
DRAINAGE EASEMENT

70' DETENTION
AREA ESMT.

15' SETBACK / EASEMENT

HENRY AVENUE

15' SETBACK / EASEMENT

15' WATER LINE EASEMENT

8" X 6" MJ TEE WITH PLUG
IN RUN & 6" GATE VALVE
ON BRANCH (BEGIN
PRIVATE FIRE MAIN)

3" SDR-21 PVC
WATER SERVICE

8" D.I. PRIVATE FIRE MAIN

8" D.I. PRIVATE FIRE MAIN

8" DR-18 PVC WATER LINE

PRIVATE FIRE
HYDRANT

ELECTRIC BOX

SIDEWALK

BIKE/WALK PATH

15' SETBACK / EASEMENT

PROPOSED 2"
WATER METER

EXTEND EXISTING
WATER LINE

#2350
sdmh rim 4.68 inv
RIM ELEV=389.02

#2351
sdmh rim 5.88 inv
RIM ELEV=388.79

#1571
7.02 Inv curb inlet rim
RIM ELEV=408.34

#1559
curb inlet rim 7.5 Inv
RIM ELEV=408.61

CHRISTY LANE

15' WATER LINE
EASEMENT

NOTES:

1. ALL WATER AND SEWER WORK SHALL COMPLY WITH THE REQUIREMENTS OF CITY OF BRYANT STANDARD SPECIFICATIONS FOR DESIGN OF WATER AND SEWER AND THE ARKANSAS PLUMBING CODE. CITY OF BRYANT STANDARD SPECIFICATIONS ARE AVAILABLE FOR DOWNLOAD FROM WWW.CITYOFBRYANT.COM

2. ALL GAS WORK SHALL COMPLY WITH THE REQUIREMENTS OF SUMMIT UTILITIES AND ARKANSAS PLUMBING CODE.

20' 10' 0 20'

DATE	REVISION	BY

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STATE OF ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
NO. 9551
VERNON J. WILLIAMS

03-13-2023

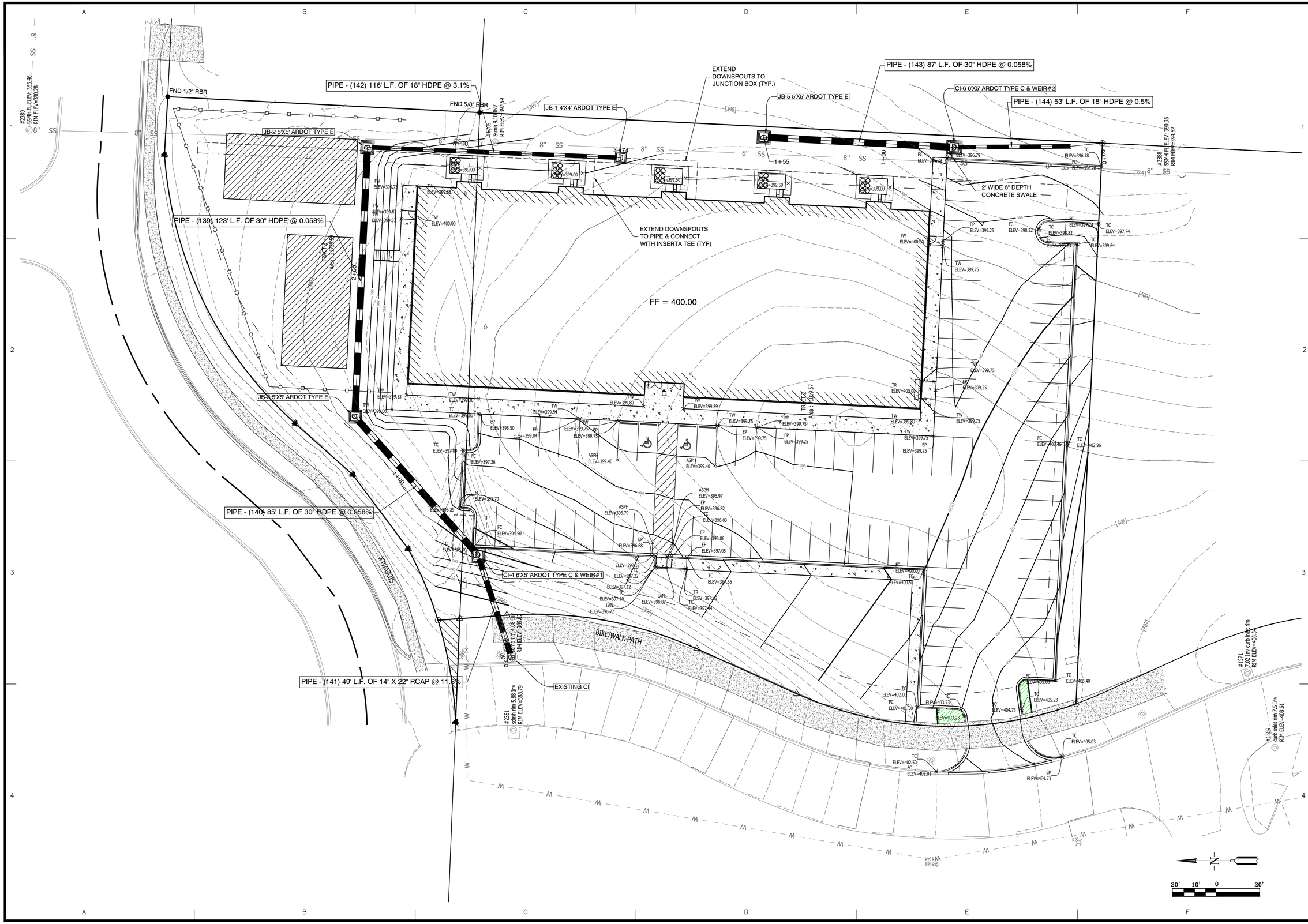
CONTENTS:

UTILITY PLAN

PROJECT NO:
22140

DATE:
MARCH 13, 2023

SHEET NO:
C2.0



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VERNON J. WILLIAMS
REGISTERED PROFESSIONAL ENGINEER
NO. 9551

03-10-2023

CONTENTS:
GRADING & DRAINAGE PLAN

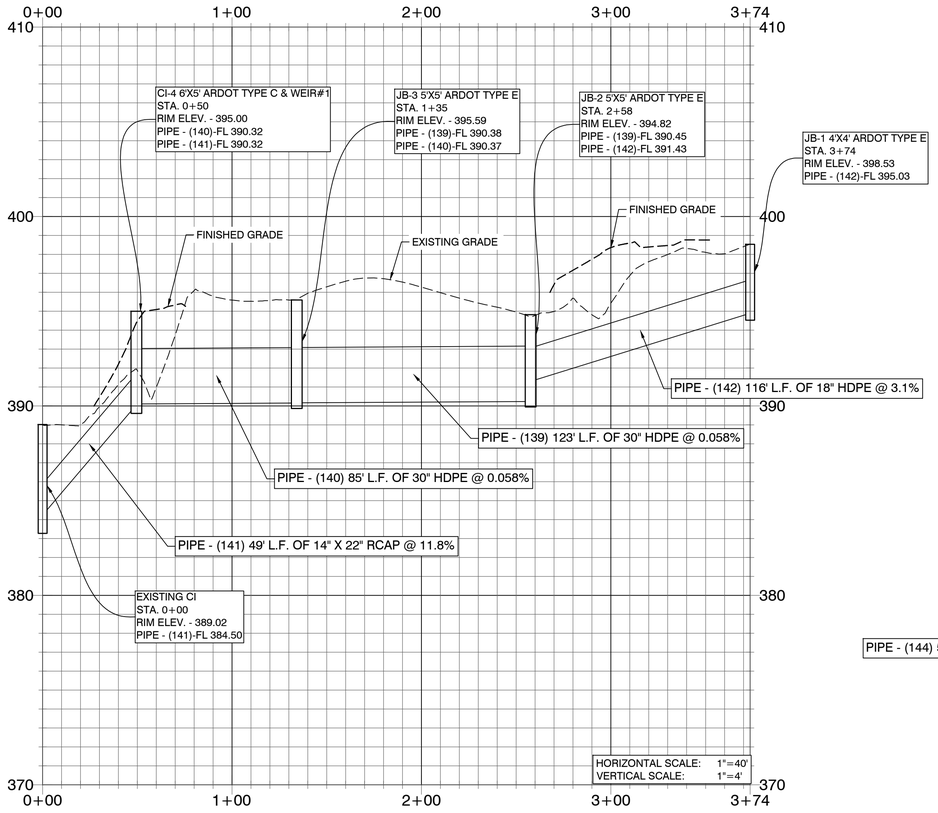
PROJECT NO: 22140

DATE: DATE

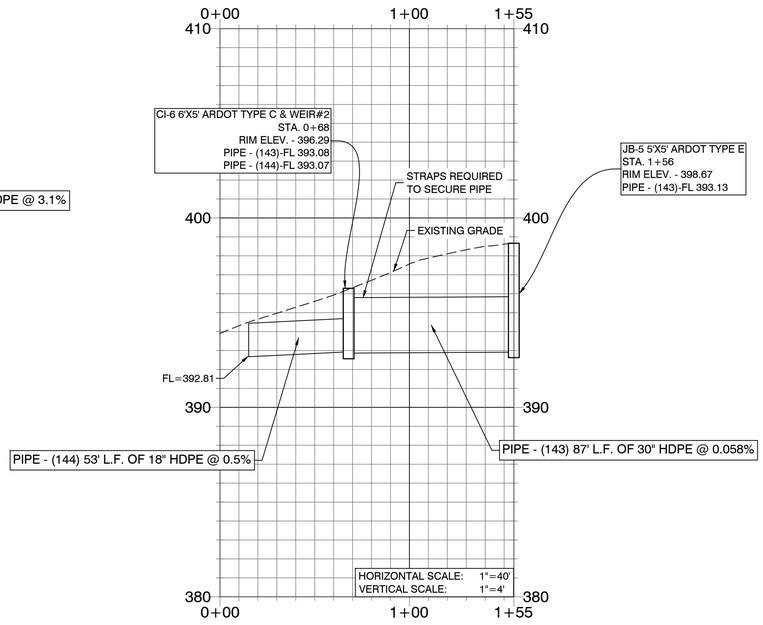
SHEET NO: C3.0

a:\Projects\2022 Projects\22140 Vernia Office Park\Drawings\Design\22140-John Eckart-Sports-ADA-Gym-Plan Prelim.dwg

NORTH STORM DETENTION PROFILE



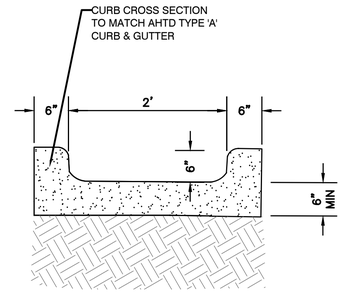
SOUTH STORM DETENTION PROFILE



HDPE PIPE MINIMUM
COVER REQUIREMENTS:

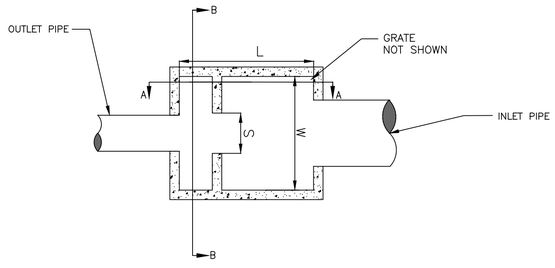
30" HDPE - 22" MIN. COVER

IF THERE IS NOT MINIMUM COVER
THEN THE PIPE NEEDS STRAPS
TO BE SECURED.**



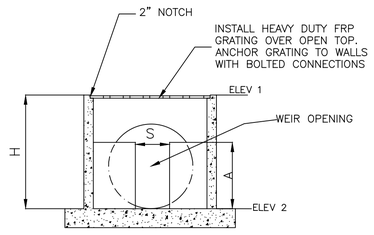
CONCRETE SWALE

NOT TO SCALE



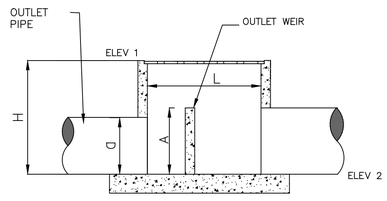
OUTLET STRUCTURE - WEIR PLAN VIEW

NOT TO SCALE



OUTLET STRUCTURE - WEIR SECTION B-B

NOT TO SCALE



OUTLET STRUCTURE - WEIR SECTION A-A

NOT TO SCALE

OUTLET STRUCTURE								
OUTLET STRUCTURE	L	W	H	ELEV 1	ELEV 2	S	A	D
WEIR#1	6'–0"	5'–0"	4'–8"	395.00	390.32	0'–8"	2'–6"	14"X22"
WEIR#2	6'–0"	5'–0"	3'–3"	396.30	393.08	0'–4"	2'–6"	18"

DETENTION OUTLET NOTES:

1. ALL CONCRETE WALLS SHALL BE A MINIMUM OF 6" THICK & REINFORCED WITH #4'S @ 12" O.C. BOTH WAYS.
2. BOTTOM SLAB SHALL BE 12" THICK & REINFORCED WITH #4'S @ 12" O.C. BOTH WAYS.

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VERNON J. WILLIAMS
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03-10-2023

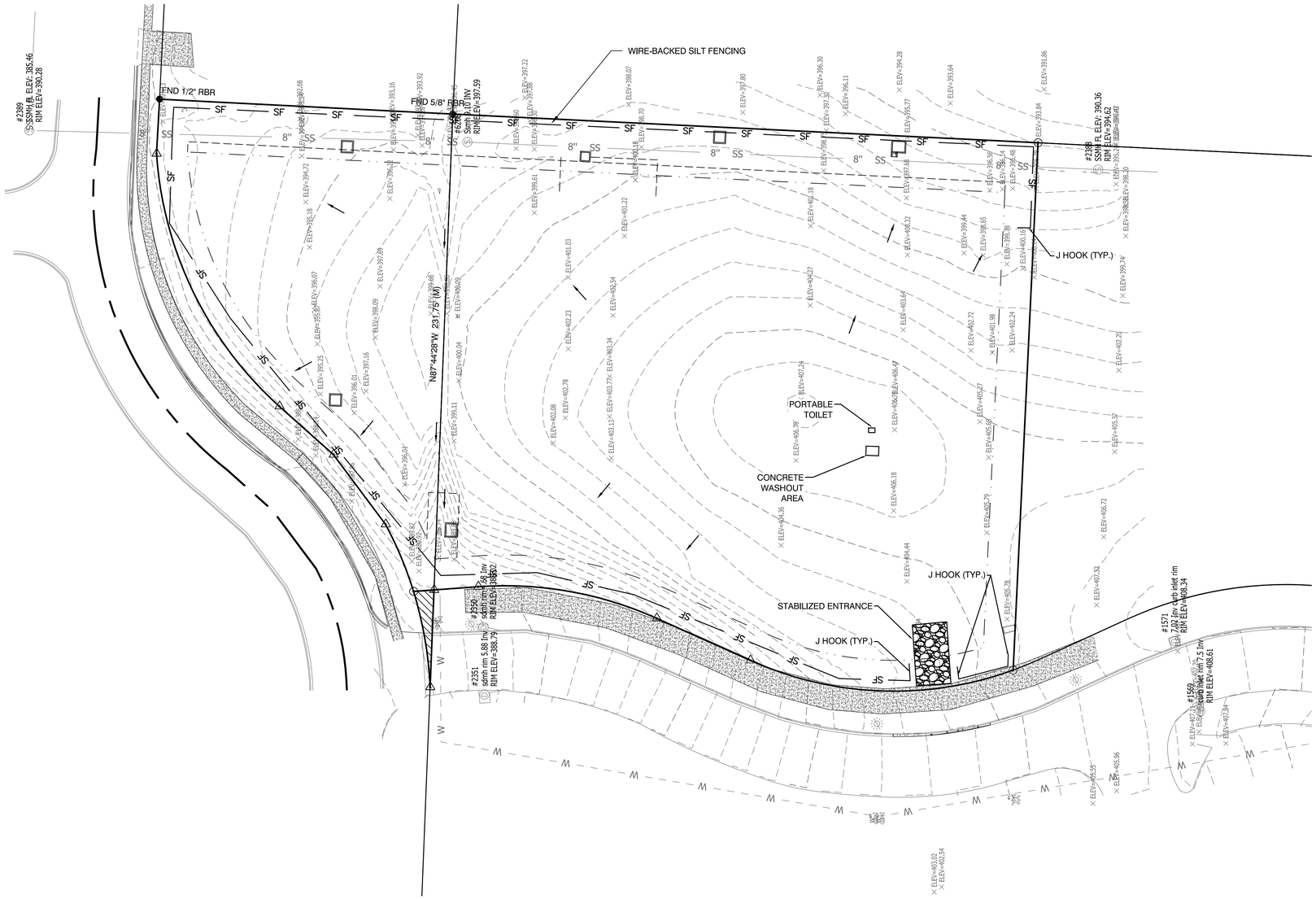
CONTENTS:
DRAINAGE PROFILES & DRAINAGE DETAILS

PROJECT NO: 22140

DATE: DATE

SHEET NO: C3.1

a:\Projects\2022 Projects\22140 Vernia Office Park\Drawings\Design\22140-xbim Export System Civil-System Pipe Profile.dwg



BMP NOTES:

1. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

2. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

3. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIAL SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

4. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

5. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

6. IF THE ACTION OF VEHICLES TRAVELING OVER THE SITE IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF OF THE SITE.

7. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

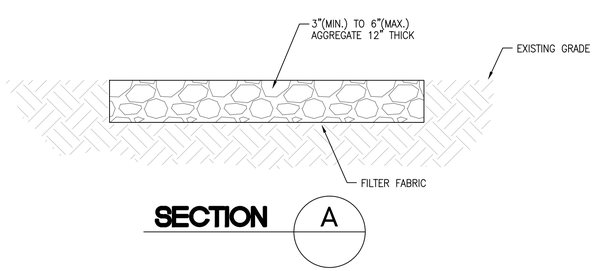
8. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

9. ON-SITE & OFF SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

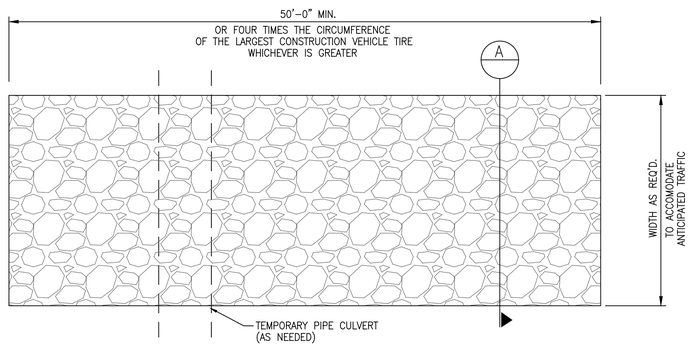
10. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

TOTAL SITE: 2.13 ACRES (INCLUDES R-0-W)

TOTAL DISTURBED AREA: 2.13 ACRES (INCLUDES R-O-W)



SECTION A



STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

LEGEND:

- 500 — EXISTING CONTOURS
- DIRECTION OF OVERLAND FLOW
- SF — SILT FENCING

N

30' 15' 0 30'

BY	REVISION	DATE

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ALEXANDER, ARKANSAS 72002

STATE OF ARKANSAS
Vernon W. Williams
REGISTERED PROFESSIONAL ENGINEER
NO. 9551
VERNON W. WILLIAMS

03-10-2023

CONTENTS:

EROSION CONTROL PLAN

PROJECT NO: 22140

DATE: DATE

SHEET NO: C4.0

J:\Projects\2022 Projects\22140 Vernia Office Park\Drawings\Design\22140-John Eckert-Sports-ADA-Gym Plan Finished.dwg

(4) NELLIE R. STEVENS HOLLY

FND 1/2" RBR

FND 5/8" RBR

#2389
SSMH FL ELEV: 385.46
RIM ELEV=390.28

#6205
Ssmh 9.10 INV
RIM ELEV=397.59

#2388
SSMH FL ELEV: 390.36
RIM ELEV=394.62

8" SS

SOD

BUILDING FINISH FLOOR = 400
21,225 SQUARE FEET

N87°44'28"W 231.75' (M)

(39) COMPACTA HOLLY

(23) COMPACTA HOLLY

HENRY AVENUE

SIDEWALK

BIKE/WALK PATH

#2361
sdmh rim 5.88 Inv
RIM ELEV=388.79

#2361
7.90 Inv curb inlet rim
RIM ELEV=408.34

(5) OCTOBER GLORY RED MAPLE

(22) STELLA D'ORO DAYLILY - 50 SQ. FT.

STEEL EDGING (TYP.)

ELECTRIC BOX

#1571
7.02 Inv curb inlet rim
RIM ELEV=408.34

#1569
curb inlet rim 7.5 Inv
RIM ELEV=408.61

CHRISTY LANE

W

M

20' 10' 0 20'

A B C D E F

1 2 3 4

BY	REVISION	DATE

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A NEW ELITE VOLLEYBALL ACADEMY GYM FOR JOHN ECKART VERNIA OFFICE PARK
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ALEXANDER, ARKANSAS 72002

LICENSED LANDSCAPE ARCHITECT
CHAD M. OPPENHUIZEN
No. 5064
ARKANSAS

3/13/23

CONTENTS:

LANDSCAPE PLAN

PROJECT NO: 22140

DATE: MARCH 13, 2023

SHEET NO: L1.0

LANDSCAPING NOTES:

1. REPORT ANY DISCREPANCIES FOUND IN THE PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ADVISE THE DESIGNER OF ANY CONDITION FOUND ON THE SITE WHICH PROHIBITS INSTALLATION AS SHOWN ON THESE DRAWINGS.

2. THE NUMBER OF PLANTS OR INTENDED COVERAGE AREAS SHOWN SHALL SUPERSEDE NOTED QUANTITIES. TREE LOCATIONS ARE DIAGRAMMATIC.

3. ALL PLANT MATERIALS MUST BE APPROVED PRIOR TO INSTALLATION. SUBSTITUTIONS OF SIZE OR TYPE OF MATERIAL ARE NOT PERMITTED WITHOUT WRITTEN APPROVAL PRIOR TO DELIVERY OR INSTALLATION.

4. ALL PLANT MATERIALS SHALL BE MAINTAINED IN A HEALTHY AND GROWING CONDITION. REPLACE ANY DAMAGED, DESTROYED, OR REMOVED PLANT MATERIALS WITH THE SAME VARIETY AND SIZE PRIOR TO FINAL ACCEPTANCE.

5. PLANT STORAGE TO BE LOCATED OUT OF VEHICULAR USE AREAS AND NEAR A WATERING SYSTEM TO OPTIMIZE SURVIVAL.

6. ALL PLANTING BEDS SHALL BE IRRIGATED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM.

7. ALL PLANTING BEDS SHALL BE MULCHED WITH 3-INCHES SHREDDED HARDWOOD OR CYPRESS MUCH.

8. ALL SHRUBS AND TREES SHALL RECEIVE PLANTING BACKFILL OF 2/3 TOPSOIL AND 1/3 COMPOST BY VOLUME AND 2 POUNDS OF 14-14-14 TIMED-RELEASE FERTILIZER PER CUBIC YARD OF BACKFILL.

9. ALL BEDS INSIDE LAWN AREAS TO BE EDGED WITH 4" PAINTED STEEL EDGING.

10. ALL TREES AND SHRUBS SHALL BE THOROUGHLY WATERED IMMEDIATELY AFTER PLANTING.

11. TREES SHALL NOT BE TOPPED AT ANY TIME. PROPER TREE PRUNING TECHNIQUES AS ESTABLISHED BY THE LATEST EDITION OF ANSI A300 STANDARDS FOR TREE CARE SHALL BE UTILIZED FOR MAINTENANCE PURPOSES.

12. COORDINATE ALL INSTALLATION ACTIVITIES WITH IRRIGATION WORK AND IMMEDIATELY REPAIR DAMAGES TO FINISH GRADES, SOD, AND PLANT MATERIALS UNTIL FINAL ACCEPTANCE.

13. SEE GRADING AND DRAINAGE PLAN FOR PROPOSED SLOPES, SWALES, BERMS, AND WATER FEATURES. MAINTAIN PROPER FINISH GRADES IN ALL AREAS AS INDICATED.

14. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR FINE GRADING, REMOVAL OF MISCELLANEOUS DEBRIS AND ANY ADDITIONAL FILL REQUIRED TO PROVIDE MINIMUM TOPSOIL DEPTHS AND CREATE A SMOOTH CONDITION PRIOR TO PLANTING IN ALL AREAS.

15. TOPSOIL SHALL BE FREE OF STONES, ROOTS, CLODS, AND ANY OTHER FOREIGN MATERIAL THAT IS NOT BENEFICIAL FROM PLANT GROWTH.

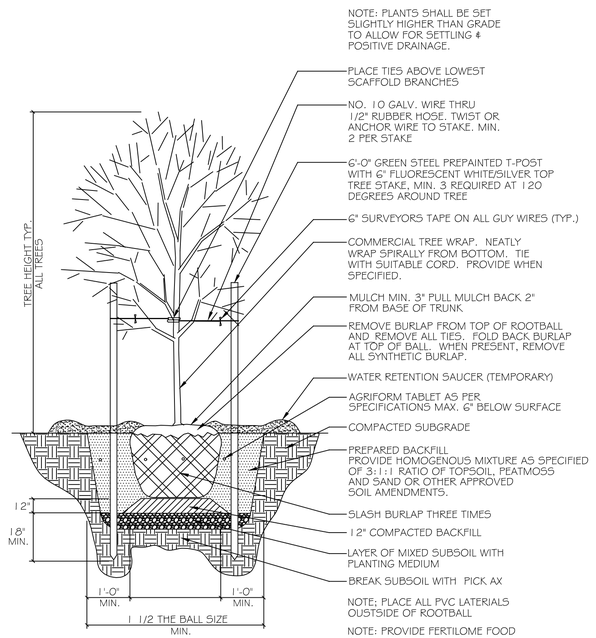
16. LANDSCAPE AND OPEN AREAS SHALL BE KEPT FREE OF TRASH, LITTER, AND WEEDS AT ALL TIMES DURING CONSTRUCTION.

17. IDENTIFICATION LABELS MUST BE ATTACHED TO ALL PLANT MATERIALS AND SHALL REMAIN INTACT UNTIL FINAL ACCEPTANCE OF THE WORK. REMOVE ALL TAGS AND LABELS FOLLOWING FINAL ACCEPTANCE.

18. CALIPER OF TREES TO BE MEASURED 6-INCHES ABOVE GROUND LEVEL FOR TREES UP TO 4-INCH CALIPER SIZE.

19. GENERAL CONTRACTOR SHALL PROVIDE 6-INCH DIAMETER MINIMUM SCHEDULE 40 PVC SLEEVING FOR IRRIGATION TO ALL CURB ISLANDS AND UNDER ALL DRIVE ISLE CROSSINGS.

20. CONTRACTOR TO REFER TO THE UTILITY PLAN SHEET FOR RECENT FIRE FLOW INFORMATION.



1 L1 TREE PLANTING DETAIL
No Scale

SODDING OF DISTURBED AREAS

AREAS AND LIMITS OF SODDING ARE INDICATED BASED ON ANTICIPATED DISTURBANCE BY GRADING OPERATIONS. CONTRACTOR TO PROVIDE ADDITIONAL SODDING IN ANY OTHER AREAS DISTURBED BY WORK UNDER THIS CONTRACT. EXCAVATE AND REMOVE ANY REMAINING TURF AND SOIL TO A 4-INCH MINIMUM DEPTH WITHIN NEW SOD AREAS. HAND EXCAVATION REQUIRED WITHIN DRIP LINES OF TREE AREAS TO AVOID DAMAGE TO EXISTING ROOTS.CONTRACTOR TO INSTALL MINIMUM OF 3" OF TOPSOIL TO ALL AREAS TO BE SODDED OR SEEDED. FINE GRADE THE TOPSOIL TO ENSURE POSITIVE DRAINAGE AND A SMOOTH SURFACE FOR SOD INSTALLATION.

MAINTENANCE AND WARRANTY

CONTRACTOR TO PROVIDE FULL MAINTENANCE OF INSTALLED LANDSCAPE AND IRRIGATION UNTIL DATE OF FINAL ACCEPTANCE. ADDITIONALLY, CONTRACTOR TO PROVIDE ONE YEAR WARRANTY FOR ALL LANDSCAPE AND IRRIGATION WORK FROM THE DATE OF FINAL ACCEPTANCE.

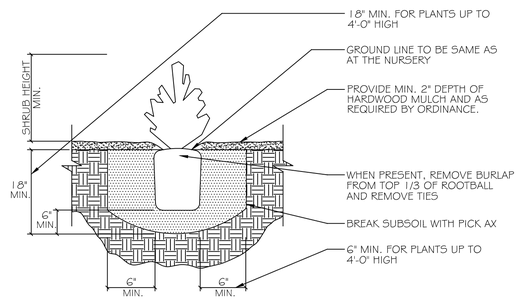
IRRIGATION SYSTEM

CONTRACTOR TO PROVIDE AUTOMATIC IRRIGATION SYSTEM FOR ALL NEW LANDSCAPE AND TURF AREAS SHOWN ON THE PLANS. SYSTEM WILL REQUIRE PROVIDING BACKFLOW PREVENTER, PERMITTING, POWER CONNECTION, CONTROLLER, AND ALL OTHER WORK REQUIRED FOR A COMPLETE AND FUNCTIONING SYSTEM THAT PROVIDES 100% COVERAGE. COORDINATE LOCATION OF CONTROLLER WITH OWNER, GENERAL CONTRACTOR, AND ELECTRICAL CONTRACTOR. COORDINATE LOCATION OF IRRIGATION SLEEVES WITH GENERAL CONTRACTOR PRIOR TO FULLY MOBILIZING TO SITE. CONTRACTOR TO REFER TO THE UTILITY PLAN SHEET FOR CURRENT FIRE FLOW INFORMATION.

LEGEND:

PLAN QUANTITIES:

	QUANTITY:	COMMON NAME / BOTANICAL NAME:	SIZE:	REMARKS:
	5	October Glory Red Maple Acer rubrum ' October Glory'	2" caliper	Specimen with positive upright form and symmetrical. Well branched canopies.
	4	Nellie R. Stevens Holly Ilex x 'Nellie R. Stevens'	5-6' tall	Specimen with positive upright form and symmetrical. Well branched canopies.
	46	Compacta Holly Ilex crentata 'Compacta'	3 gallon	Full well branched shrub with uniform shape.
	44	Stella D'Oro Daylily Hemerocallis x Stella D'oro	1 gallon	Plant 18" o.c.
	CONTRACTOR TO MEASURE	Bermuda Tifway 419 Cynodon Dactylon var. Tifway 419	SOD	Solid sod, all areas indicated with close knit joints



NOTES:
1. PROVIDE WEED CONTROL AND/OR FERTILIZER AS SPECIFIED BELOW.
2. WEED CONTROL AND FERTILIZER MAY BE APPLIED AT A LATER DATE TO COMPLY WITH SEASONAL CONDITIONS AND THE GROWING PERIOD.
3. PROVIDE AGRIFORM TABLETS AS PER MANUFACTURERS RECOMMENDATIONS.
4. PROVIDE HOMOGENOUS BACKFILL PLANTING MIXTURE OF 3:1 RATIO TOPSOIL TO PEATMOSS AND/OR OTHER APPROVED SOIL AMENDMENTS.
5. PROVIDE FERTILOME ROOT STIMULATOR OR APPROVED EQUAL IN PITS.
6. APPLY BALAN PREEMERGENT WEED CONTROL OR APPROVED EQUAL TREATMENT ON ALL SHRUB AND GROUNDCOVER BEDS.

2 L1 SHRUB PLANTING DETAIL
No Scale

BY	REVISION	DATE

GNE Designing our client's success
GarNat Engineering, LLC
P.O. Box 116 3825 Mt Carmel Rd
Benton, AR 72018 Bryant, AR 72022
Ph (501) 408-4650 garnatengineering@gmail.com

A NEW ELITE VOLLEYBALL ACADEMY GYM FOR JOHN ECKART VERNIA OFFICE PARK 1601 CHRISTY LANE ALEXANDER, ARKANSAS 72002

LICENSED LANDSCAPE ARCHITECT CHAD M. OPPEINHUIZEN No. 5064 ARKANSAS

3/13/23

CONTENTS:

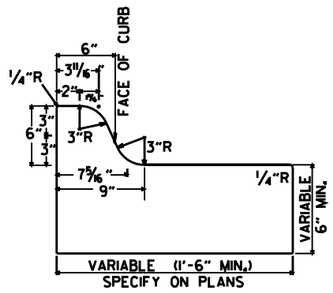
LANDSCAPING NOTES & DETAILS

PROJECT NO: 22140

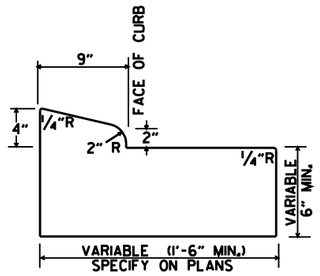
DATE: MARCH 13, 2023

SHEET NO: L1.1

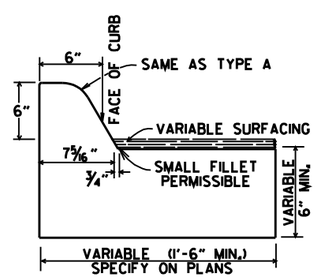
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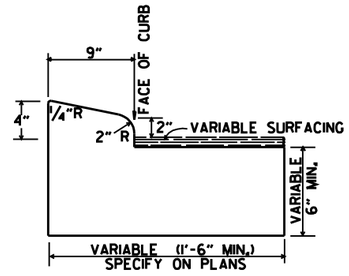
TYPE A



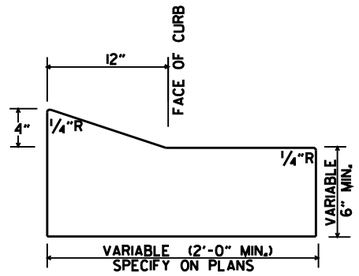
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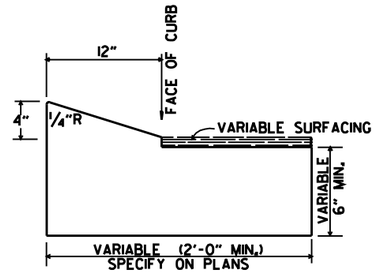
TYPE C



TYPE B-2

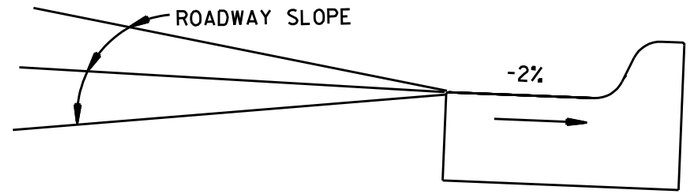


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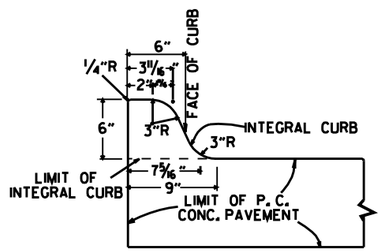
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

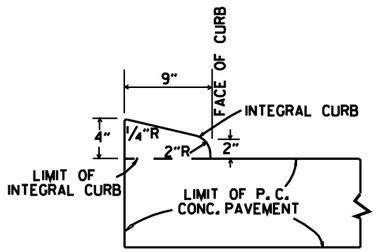


DETAIL OF GUTTER SLOPE

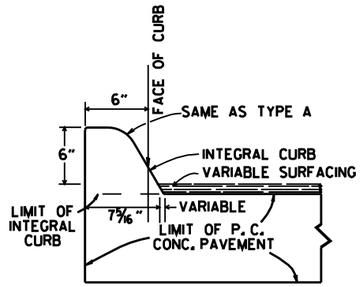
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

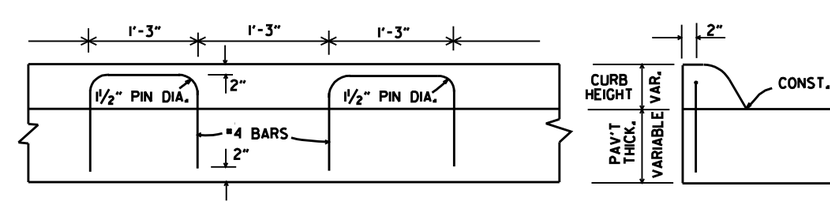


TYPE B

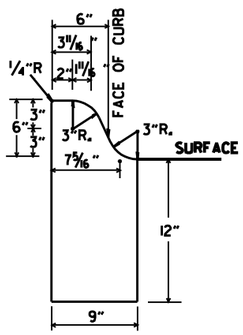


TYPE C

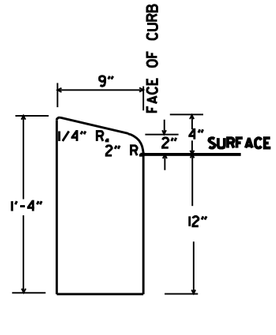
INTEGRAL CURB



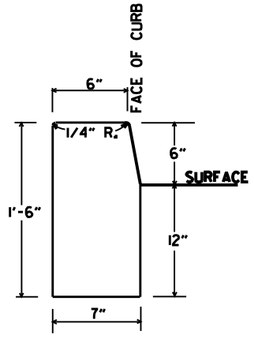
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



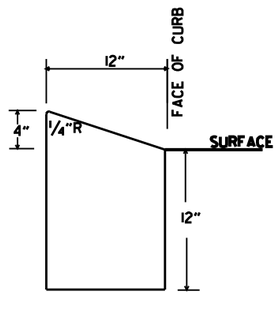
TYPE A



TYPE B

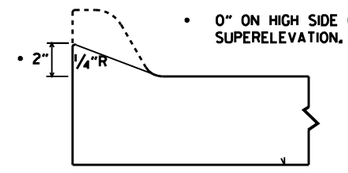


TYPE D



TYPE E

CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

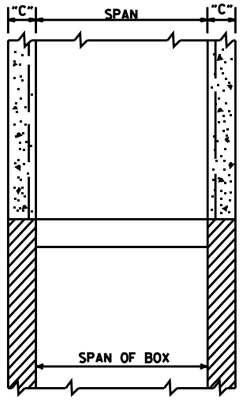
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
11-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
11-18-98	REVISED MODIFIED CURB	
6-2-94	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-5-93	CORRECTED GUTTER SLOPE	8-5-93
10-1-92	ADDED DETAILS OF GUTTER SLOPE	10-1-92
5-24-90	ADDED DETAILS OF MODIFIED CURB	5-24-90
11-30-89	VARIBLE DEPTH TYPE A & B I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
11-1-73	REVISED MODIFIED CURB	500-11-1-73
10-2-72	REVISED AND REDRAWN	52-10-2-72

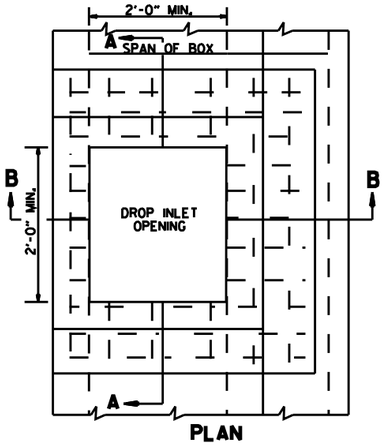
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

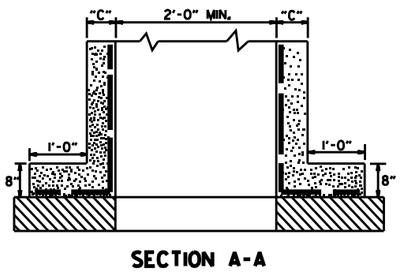
STANDARD DRAWING CG-1



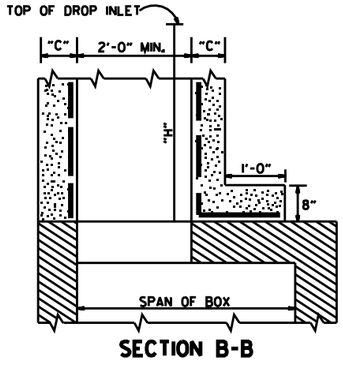
SECTION B-B



PLAN

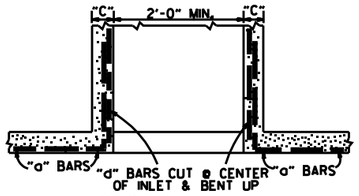


SECTION A-A

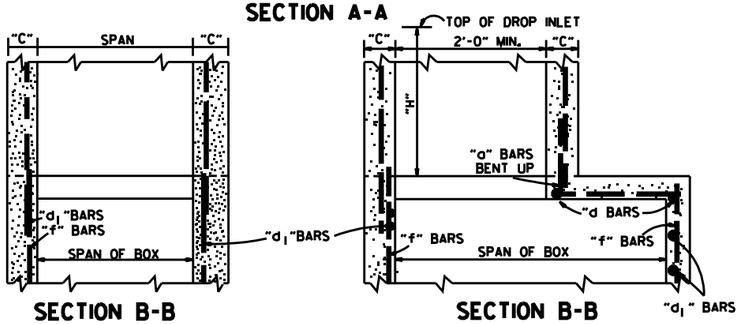


SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



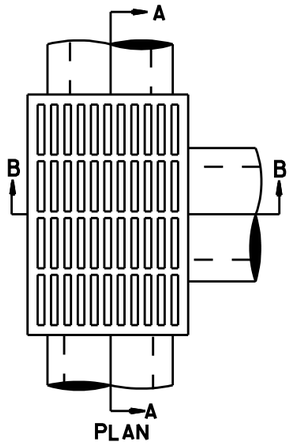
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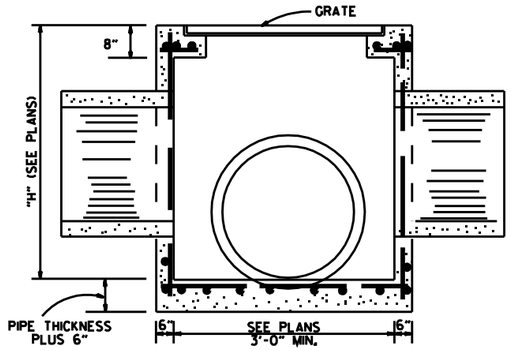
SECTION B-B SECTION B-B

METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.

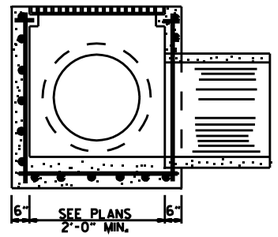


PLAN



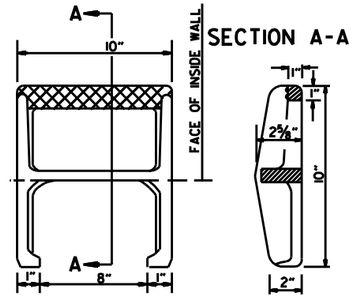
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



SECTION B-B

DROP INLET (TYPE E)



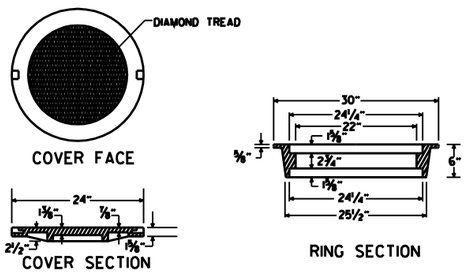
SECTION A-A

APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

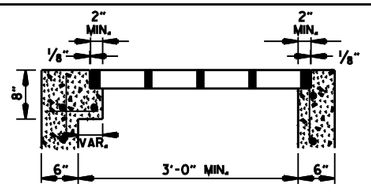
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

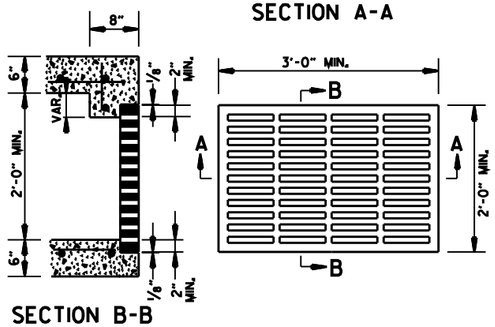


APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



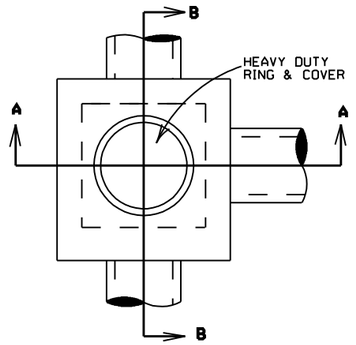
SECTION A-A



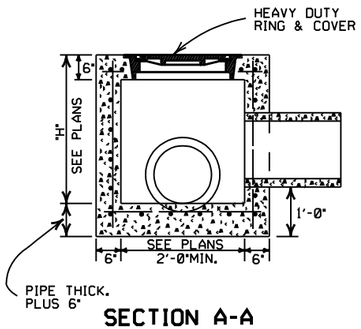
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

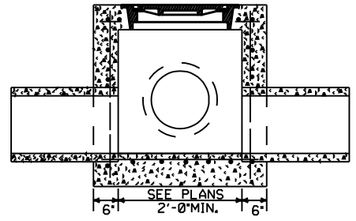


PLAN



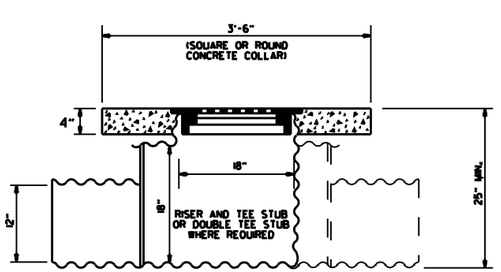
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

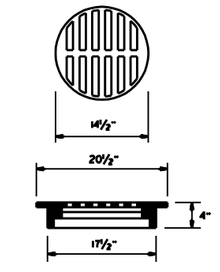


SECTION B-B

JUNCTION BOX (TYPE E)



NOTE: CONCRETE COLLAR TO BE CAST IN PLACE. 12" PIPE CULVERTS TO BE MEASURED AND PAID FOR AS " 12" SIDE DRAIN ".



USE NEENAH R-5901-C OR EQUIVALENT BICYCLE SAFE FRAME AND GRATE

DETAIL OF YARD DRAIN

GENERAL NOTES:

1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
5. GRATE AND FRAME SHALL NOT BE PAINTED.
6. GRATE SHALL BE BICYCLE SAFE.
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

DATE REV.	REVISION	DATE FILMED
11-16-01	ADDED NOTE 10	
1-12-00	REVISED HEAVY DUTY RING & COVER	
7-02-98	CHANGED GRATE DETAIL, DELETED DI(TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97	ADDED DIMENSION TO TYPE IV-A	
10-18-96	ADDED DETAIL OF YARD DRAIN	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

STANDARD DRAWING FPC-9

4'-0" LENGTH DROP INLET

PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0" CLASS A CONC. CU. YDS.	HEIGHT 5'-0" REINF. STEEL POUNDS	PLUS OR MINUS PER LIN. FT. OF HEIGHT CLASS A CONC. CU. YDS.	PLUS OR MINUS PER LIN. FT. OF HEIGHT REINF. STEEL POUNDS
18"	2'-6"	1.77	156	0.28	22
24"	2'-6"	1.79	156	0.28	22
30"	3'-2"	2.39	205	0.30	26
36"	3'-8"	2.63	236	0.32	28
42"	4'-4"	2.95	250	0.34	30
48"	4'-10"	3.21	265	0.36	32

NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

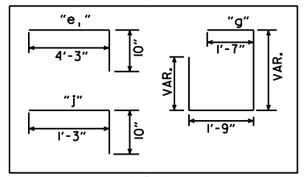
DROP INLET EXTENSION

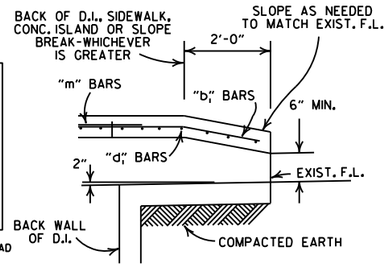
4'-0" CLASS A CONC. CU. YDS.	4'-0" REINF. STEEL POUNDS	8'-0" CLASS A CONC. CU. YDS.	8'-0" REINF. STEEL POUNDS
0.58	38	0.87	72
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
0.04	3		

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

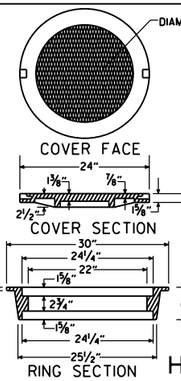
BAR DIAMETER





BACK OPENING

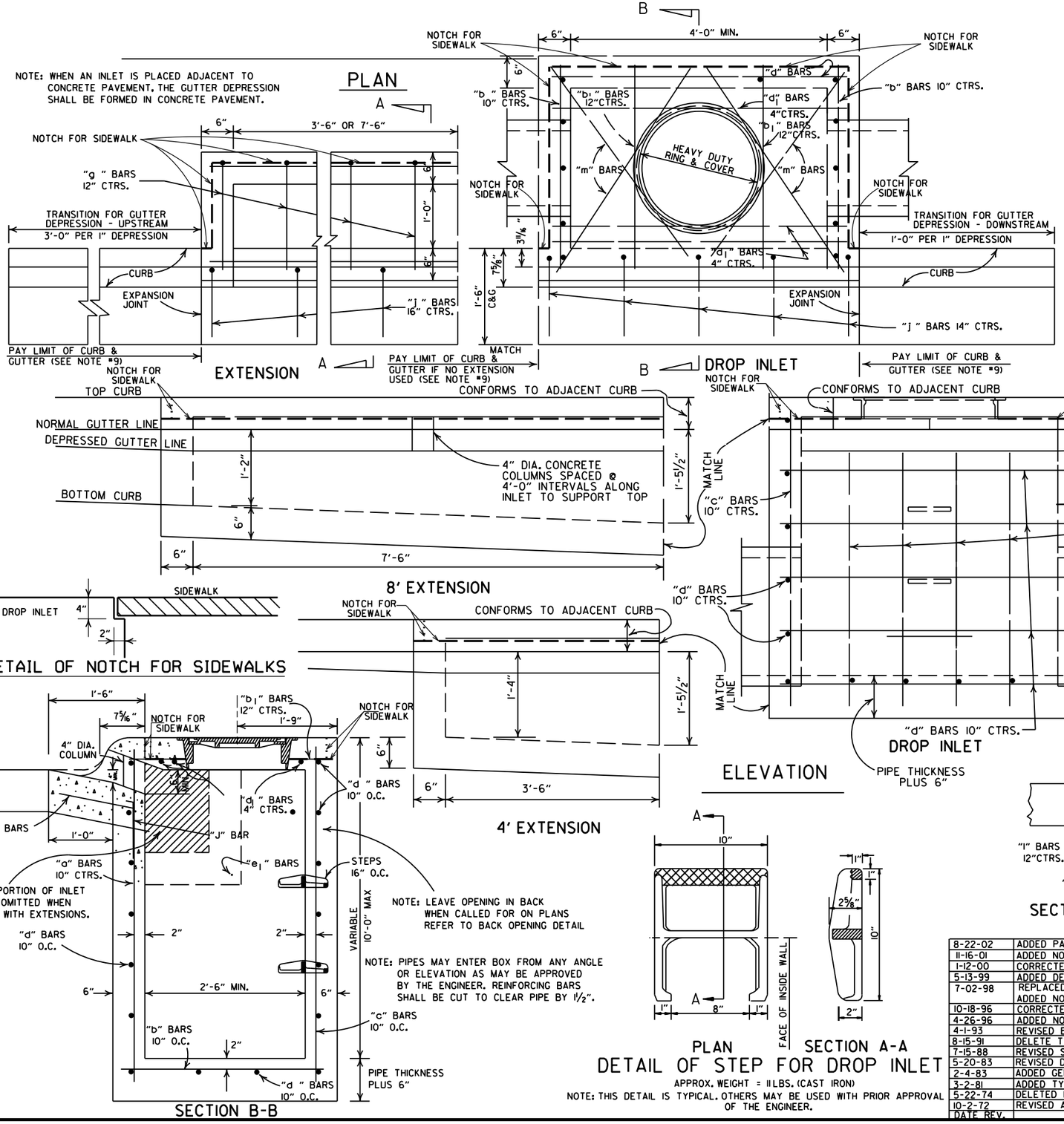
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
6. WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (FPC-9D).
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
9. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
10. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
11. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
12. 4"×2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.



DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER ADDED NOTES 9,10,&11	
10-18-96	CORRECTED SPELLING	
4-26-96	ADDED NOTE 8 & REVISED (4')(8') EXTENSION TITLES	10-18-96
4-1-93	REVISED BACK OPENING & NOTE	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

(TYPE C)

STANDARD DRAWING FPC-9E

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	ARDOT NOMINAL	AASHTO M 206	ARDOT NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅜	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(f)(1).

NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

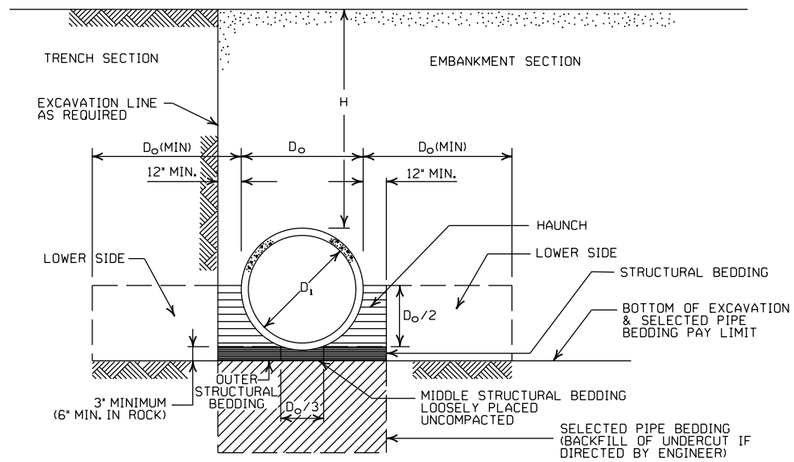
- LEGEND -

D_1 = NORMAL INSIDE DIAMETER OF PIPE
D_O = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
= UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

* SM-3 WILL NOT BE ALLOWED.

** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

MINIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

	CLASS OF PIPE			
	CLASS III		CLASS IV	CLASS V
INSTALLATION TYPE	TYPE 1 OR 2	TYPE 3	ALL	ALL
PIPE ID (IN.)	FEET			
12-15	2	2.5	2	1
18-24	2.5	3	2	1
27-33	3	4	2	1
36-42	3.5	5	2	1
48	4.5	5.5	2	1
54-60	5	7	2	1
66-78	6	8	2	1
84-108	7.5	8	2	1

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER CIRCULAR R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	16	25	39
TYPE 3	12	20	30

NOTE: IF FILL HEIGHT EXCEEDS 50 FEET, A SPECIAL DESIGN CONCRETE PIPE WILL BE REQUIRED USING TYPE 1 INSTALLATION.

MINIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2 OR TYPE 3	2.5	1.5

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

NOTE: FOR MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM OF 12" OF PAVEMENT AND/OR BASE.

MAXIMUM HEIGHT OF FILL "H" OVER R.C. ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE	
	CLASS III	CLASS IV
	FEET	
TYPE 2	13	21
TYPE 3	10	16

NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.

SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.

STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

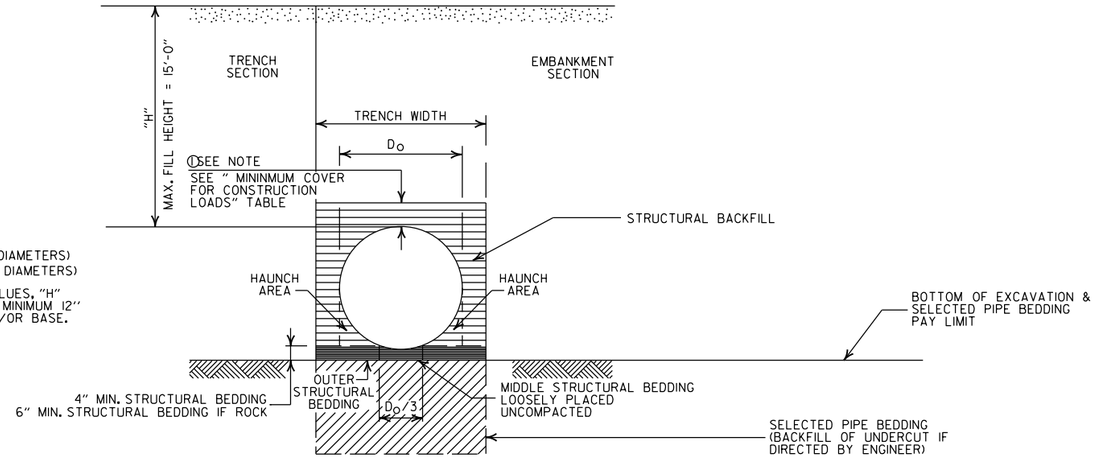
①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)

MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

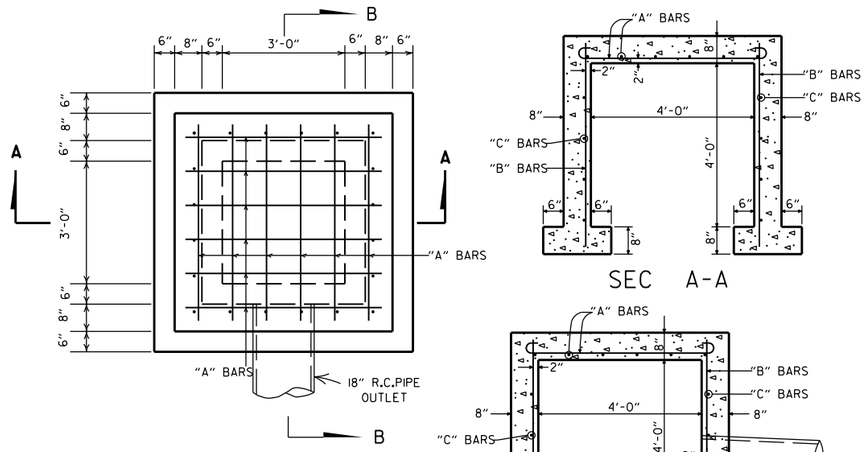
= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1



SEC A-A

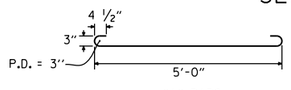
SEC B-B

NOTE: MAX FILL HEIGHT ABOVE TOP OF BOX = 13'-0".

STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 ½"
"C"	16	5'-0"	12"

ALL STEEL TO BE #4 BARS



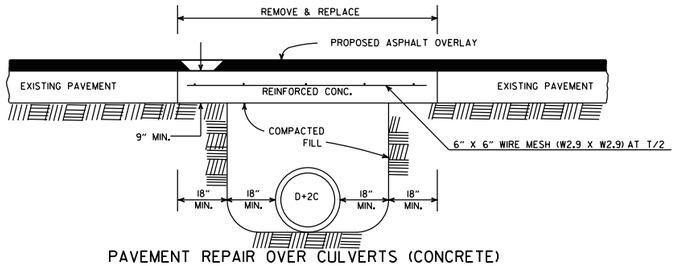
QUANTITIES

CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

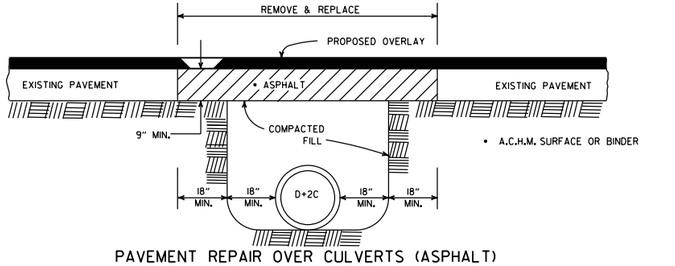
GENERAL NOTE:

THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

REINFORCED CONCRETE SPRING BOX



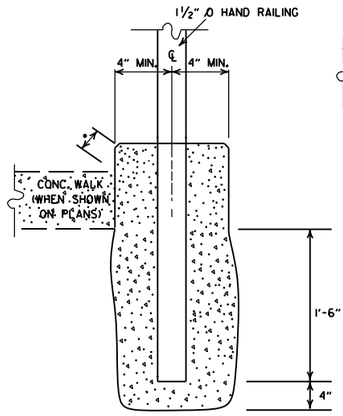
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



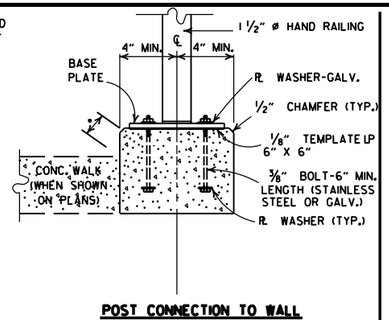
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

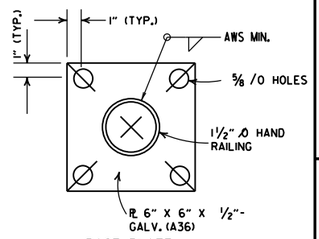
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

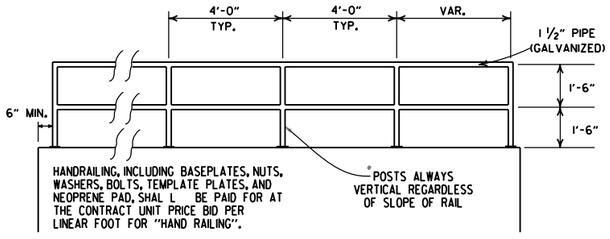


POST CONNECTION TO WALL

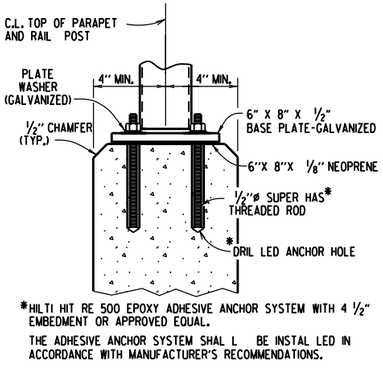


BASE PLATE

POST CONNECTION DETAILS



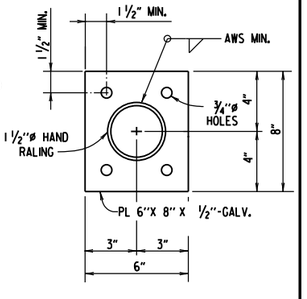
HAND RAILING SHALL CONFORM TO SECTION 633.



*HILTI HIT RE 500 EPOXY ADHESIVE ANCHOR SYSTEM WITH 4 ½" EMBEDMENT OR APPROVED EQUAL.

THE ADHESIVE ANCHOR SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

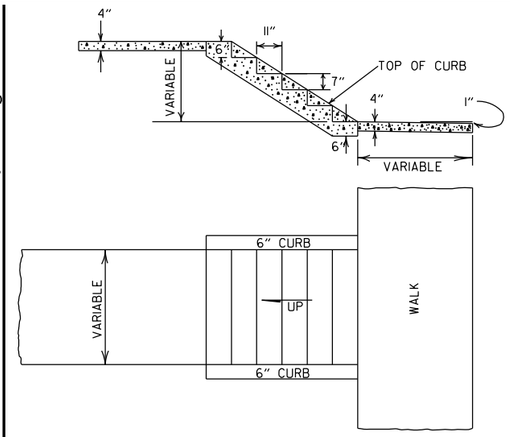
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM
(EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

DETAILS OF CONCRETE STEPS & WALKS

DATE	REVISION	DATE FILMED
9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-94	ADD WEEP HOLE;REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	649-7-15-88
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET& PAVEMENT REPAIR	674-4-20-79
2-2-76	12"MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72

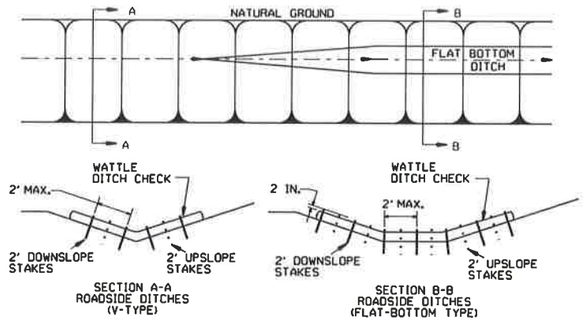
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

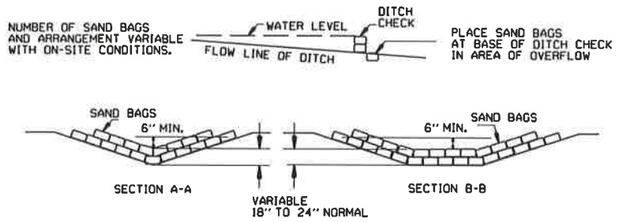
STANDARD DRAWING SI - 1

GENERAL NOTES

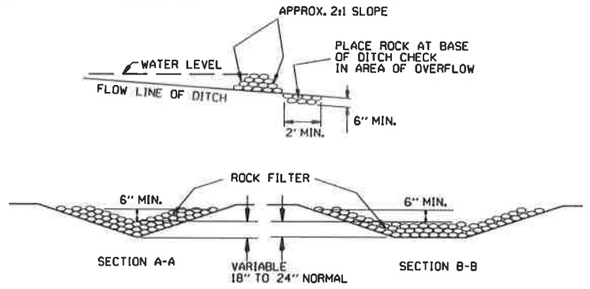
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

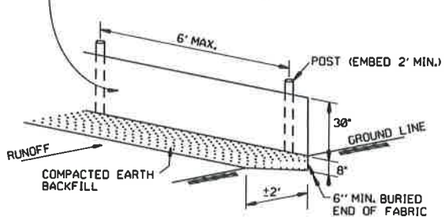


ROCK DITCH CHECK (E-6)

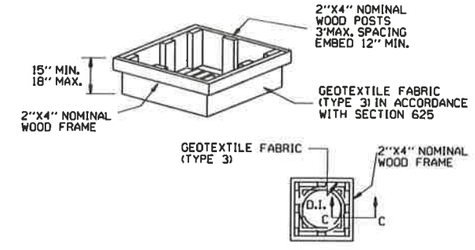
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

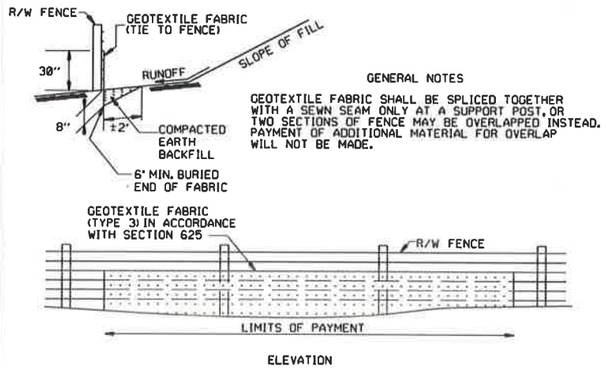
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)



DROP INLET SILT FENCE (E-7)



GENERAL NOTES

GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

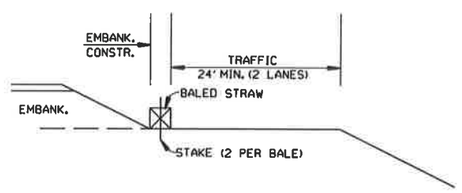
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

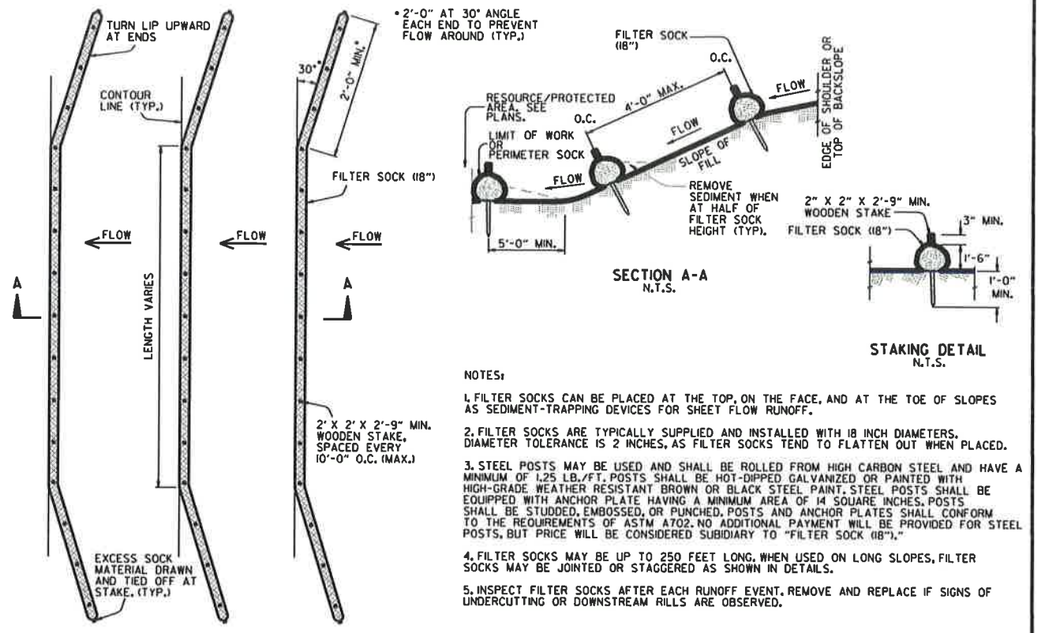
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)



NOTES:

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

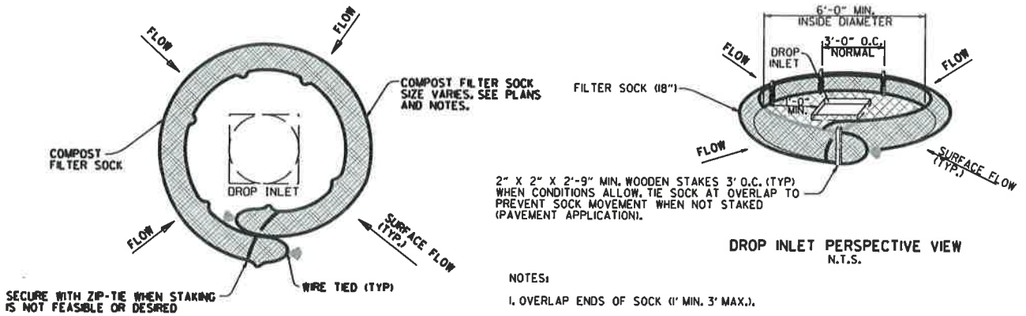
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBIDIARY TO "FILTER SOCK (18")."

4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

FILTER SOCK ALONG SLOPE (E-3)



NOTES:

1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).

2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

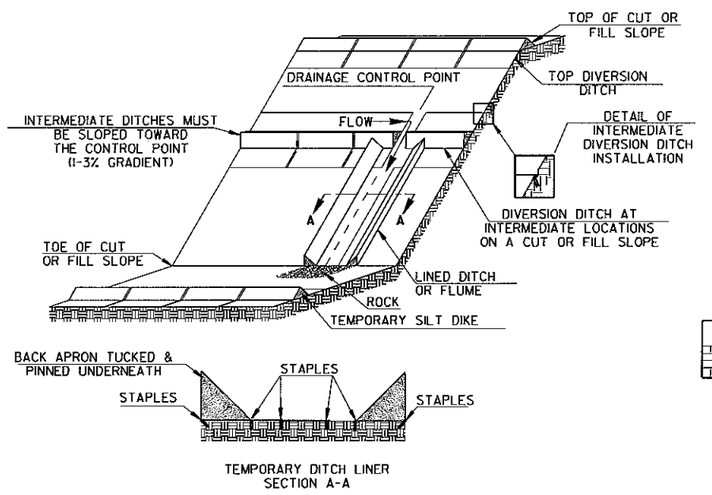
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

DATE	REVISION	FILMED
11-16-17	ADDED FILTER SOCK E-3 AND E-13	
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
07-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
06-02-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76

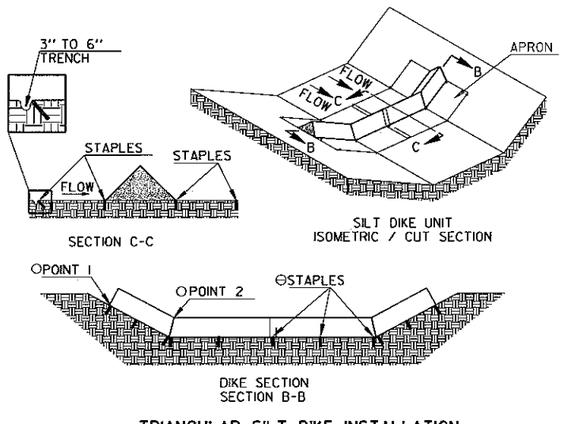
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-1



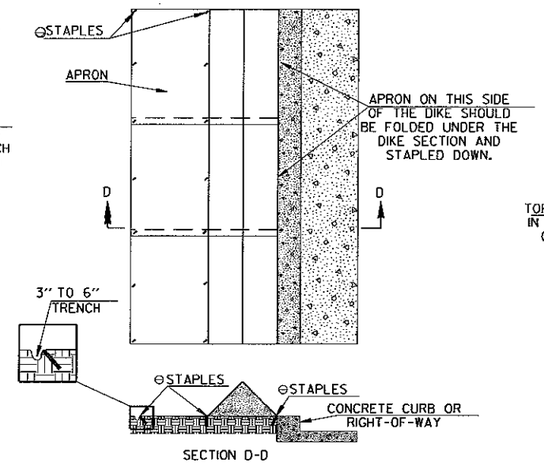
TRIANGULAR SILT DIKE INSTALLATION
FOR
DIVERSION DITCH AND/OR DITCH LINER



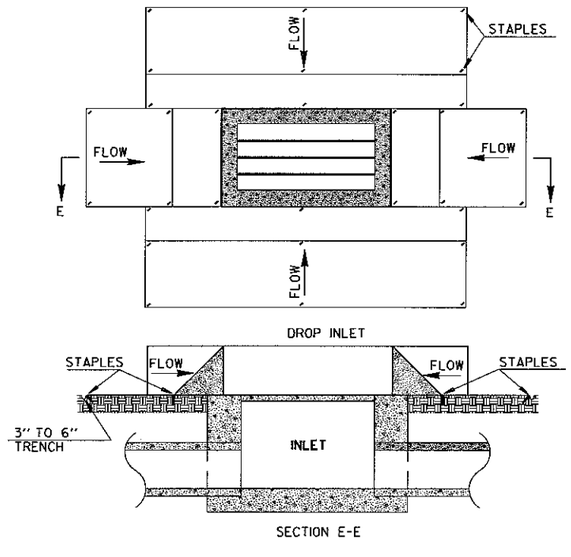
TRIANGULAR SILT DIKE INSTALLATION
FOR
ROADWAY DITCH OR DRAINAGE DITCH

○ POINT "1" MUST BE HIGHER THAN POINT "2" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

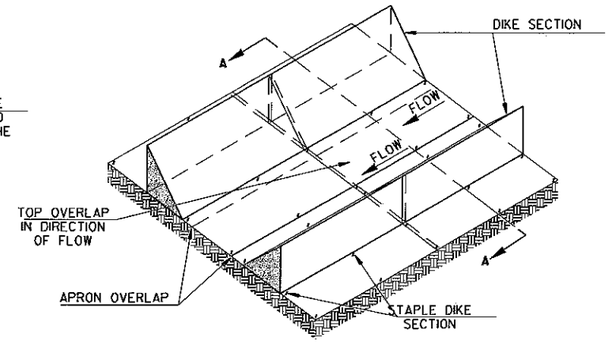
⊖ STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE UNIT AS SHOWN ON THE DIAGRAM.



TRIANGULAR SILT DIKE INSTALLATION
FOR
CONTINUOUS BARRIER



TRIANGULAR SILT DIKE INSTALLATION
FOR
DROP INLETS



TRIANGULAR SILT DIKE INSTALLATION
FOR
TEMPORARY DITCH LINER

GENERAL NOTES

1. THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND MAINTAINING THE TRIANGULAR SILT DIKE. THE DIKES SHALL BE USED AS A CONTINUOUS LINE BARRIER AT THE TOE OF SLOPE OR ACROSS THE ROADWAY DITCH TO CONTAIN SEDIMENT AND MINIMIZE EROSION, OR AS DIRECTED BY THE ENGINEER. THESE DIKES SHALL BE INSTALLED AND LOCATED AS SOON AS CONSTRUCTION WILL ALLOW OR AS DIRECTED BY THE ENGINEER.

2. TRIANGULAR SILT DIKE SHALL BE TRIANGULAR SHAPED HAVING A HEIGHT OF AT LEAST 8" TO 10" IN THE CENTER WITH EQUAL SIDES AND A 16" TO 20" BASE. THE TRIANGULAR SHAPED INNER MATERIAL SHALL BE URETHANE FOAM. THE OUTER COVER SHALL BE A WOVEN GEOTEXTILE FABRIC PLACED AROUND THE INNER MATERIAL & ALLOWED TO EXTEND BEYOND BOTH SIDES OF THE TRIANGLE 24" TO 36". THIS FABRIC SHOULD BE MILDEW RESISTANT, ROT-PROOF AND RESISTANT TO HEAT AND ULTRAVIOLET RADIATION MEETING REQUIREMENTS FOR SEDIMENT CONTROL IN AASHTO M288. THE DIKES SHALL BE ATTACHED TO THE GROUND WITH WIRE STAPLES. THE STAPLES SHALL BE NO. 11 GAUGE WIRE AND BE AT LEAST 6" TO 8" LONG. STAPLES SHALL BE PLACED AS SHOWN ON THESE DETAILS.

   THE CONTRACTOR SHALL INSPECT ALL DIKES AFTER EACH RAINFALL EVENT OF AT LEAST 0.5" OR GREATER. ANY DEFICIENCIES OR DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR. ACCUMULATED SILT OR DEBRIS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE ENGINEER. IF THE DIKES ARE DAMAGED OR INADVERTENTLY MOVED DURING THE SILT REMOVAL PROCESS, THE CONTRACTOR SHALL IMMEDIATELY REPLACE AFTER DAMAGE OCCURS.

3. ACCEPTED TRIANGULAR SILT DIKE, MEASURED AS PROVIDED ABOVE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR TRIANGULAR SILT DIKE. PRICE BID WILL INCLUDE THE COST OF FURNISHING THE DIKES, INSTALLING, MAINTAINING AND REMOVAL WHEN DIRECTED BY THE ENGINEER.

SYMBOLOGY

SYMBOL TO BE USED TO DENOTE DEVICE ON PLANS

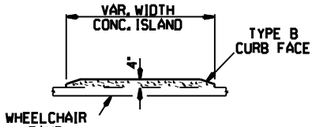
NOTE: SILT DIKE SHOULD ONLY BE USED FOR DROP INLETS IN SUMP LOCATIONS.

DATE	REVISION	FILMED
7-26-12	REVISED GENERAL NOTE 2.	
12-15-11	ISSUED	

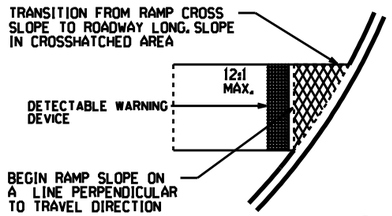
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-4



CONCRETE ISLAND DETAIL



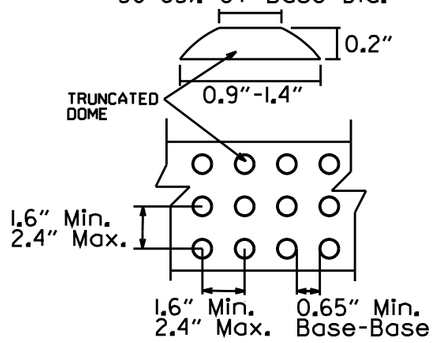
SLOPE TRANSITION DETAILS

TYPE 1 RAMP DIMENSIONS AND QUANTITIES

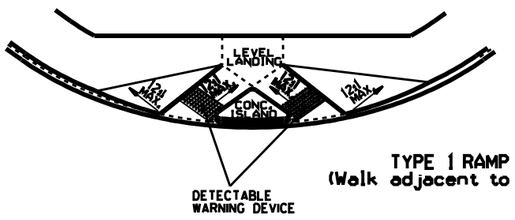
RADIUS "R" FEET	DISTANCE "X" FEET	DISTANCE "Y" FEET	LENGTH "L" FEET	RAMP AREA "A" SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80

GENERAL NOTES FOR DETECTABLE WARNING DEVICES

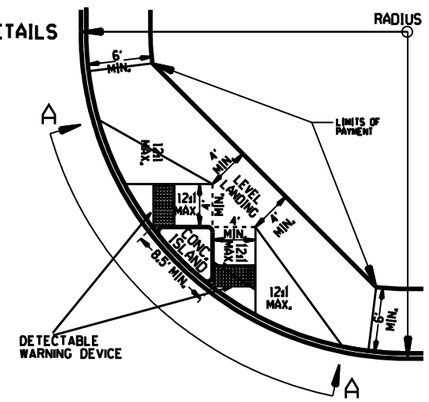
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
DETECTABLE WARNING DEVICE SHALL BE ON THE AHTD QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).

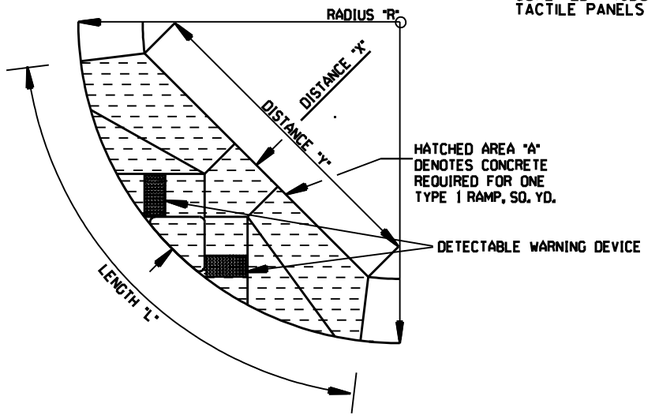


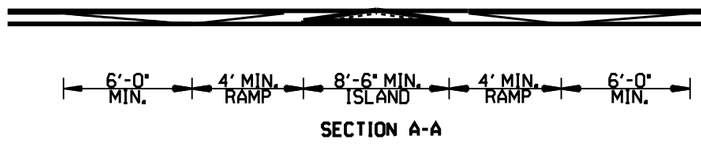
DETECTABLE WARNING DEVICE DETAIL



TYPE 1 RAMP
(Walk adjacent to curb)



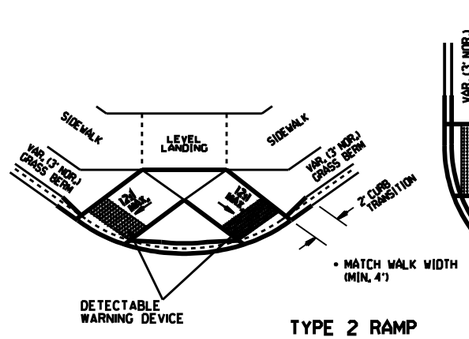




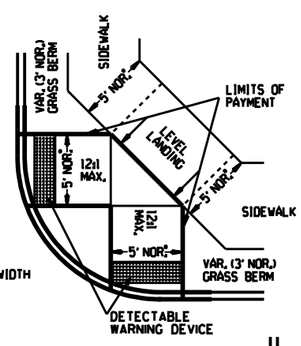
SECTION A-A

GENERAL NOTES:

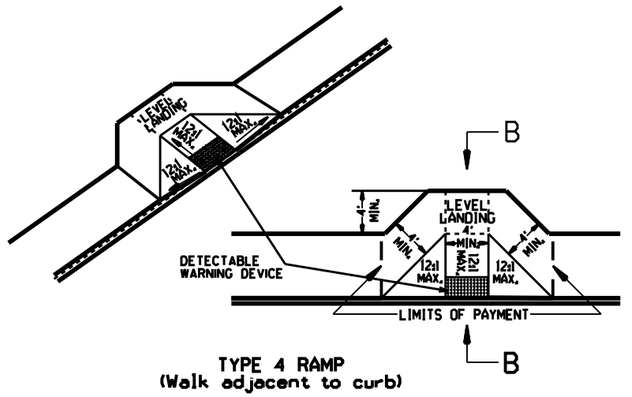
IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4".
THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.
RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.



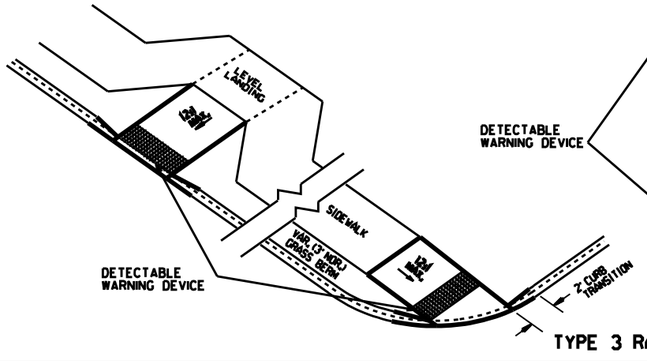
TYPE 2 RAMP

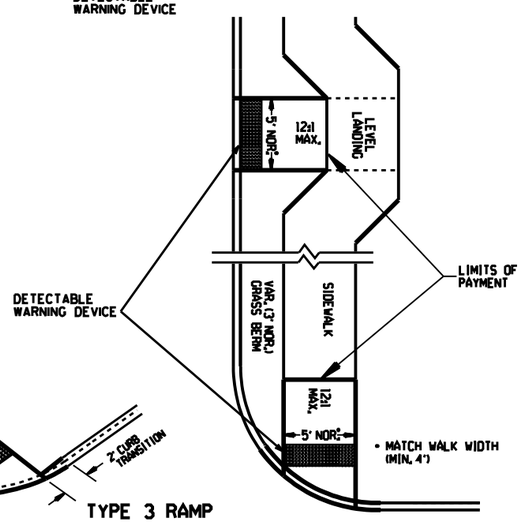


NOTE:
THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGTITUDINAL GRADE.

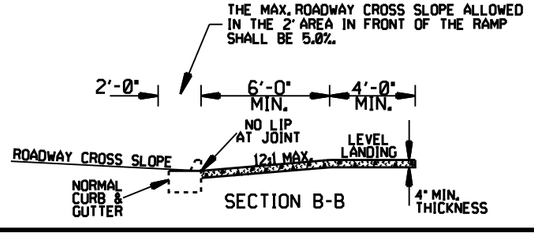


TYPE 4 RAMP
(Walk adjacent to curb)





TYPE 3 RAMP



SECTION B-B

RAMP SELECTION CRITERIA

FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.

AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

DATE	REVISION	DATE FILM
11-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
3-30-00	ADD. SLOPE TRANS. & REV. ISL. DIMS.	
11-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM/AT 0% MAX. SLOPES	5-24-90
7-15-88	ADJUSTED MAX. SLOPE	552-7-15-88
7-14-88	INCLUD. "CONC. ISLD." IN PAY ITEM	------
6-02-76	ISSUED-P.M.D.	299-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION

WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS

STANDARD DRAWING WR-1