PROJECT CLYDESDALE

SITE CIVIL PACKAGE

MASS GRADING - 95% R1 ISSUE FOR PERMIT

09/17/25

TULSA COUNTY, OK

Project # KHA060007903

PROJECT CONTACTS

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
1437 S BOULDER AVE, SUITE 930
TULSA, OK 74119
PH. (918) 380-8868

POINT OF CONTACT:
DEVIN RANDALL, P.E.
PH. (918) 380-8868

ENGINEER OF RECORD:
DEVIN RANDALL, P.E.

PROJECT DEVELOPER
CLYDESDALE TULSA HOLDINGS, LLC
2727 E. 21ST STREET, STE 200
TULSA, OK 74114

PROJECT CONTACT: LOU REYNOLDS

TULSA COUNTY
TERESA TOSH: INSPECTIONS DIRECTOR
LUCKY AIREHROUR: PLANS EXAMINER
BERRY BRITTON: ENGINEER REVIEWER
KERRICK EDENBOROUGH: ZONING OFFICER
218 W 6TH ST, 2ND FLOOR
TULSA, OK 74119
PH. (918) 596-5000

PROJECT INFORMATION

NO. OF BUILDINGS: 0 - MASS GRADING ONLY

ZONING: IL-PUD INDUSTRIAL LIGHT, AG-PUD AGRICULTURE (RESERVE C)

THE AREAS OF THE SUBJECT PROPERTIES ARE AS FOLLOWS:

BLOCK 1, LOT 1 =	42.86 ACRES
BLOCK 1, LOT 2 =	8.44 ACRES
BLOCK 1, LOT 3 =	24.46 ACRES
BLOCK 1, LOT 4 =	33.28 ACRES
BLOCK 1, LOT 5 =	159.43 ACRES
RESERVE A =	131.69 ACRES
NATURAL AREA NORTH=	43.04 ACRES
NATURAL AREA SOUTH =	62.72 ACRES
TOTAL=	505.92 ACRES

THE AREA OF THE LIMIT OF DISTURBANCE (LOD) ARE AS FOLLOWS:
LIMIT OF DISTURBANCE = ±172.47 ACRES

UTILITY NOTE

KIMLEY-HORN AND ASSOCIATES TAKES NO RESPONSIBILITY FOR EXISTING UTILITIES SHOWN HEREIN. THE EXISTING UTILITIES SHOWN ARE BASED ON INFORMATION PROVIDED BY OTHER PARTIES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND VERIFY THE LOCATIONS AND INVERTS OF THE EXISTING UTILITIES WITHIN THE VICINITY OF CONSTRUCTION ACTIVITIES. IF A CONFLICT IS FOUND TO EXIST, THE CONTRACTOR SHALL COORDINATE WITH THE PROJECT ENGINEER, PROJECT ARCHITECT(S), AND THE OWNER IMMEDIATELY.

FEMA FLOOD HAZARD NOTE

THE SUBJECT PROPERTY LIES WITHIN OTHER FLOOD AREAS ZONE X, WHICH ARE AREAS DETERMINED TO BE WITHIN THE 0.2% ANNUAL CHANCE FLOODPLAIN; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR DRAINAGE AREAS LESS THAN 1 SQUARE MILE; **AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD** PER FLOOD INSURANCE RATE MAP NO. 05035C0450E, DATED MAY 03, 2011. THE BASE FLOOD ELEVATIONS VARIES FROM 208'± TO 210'±.

ENGINEERS STATEMENT

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PROCEDURES AND GUIDELINES, AND ARE IN SUBSTANTIAL COMPLIANCE WITH APPLICABLE STATE AND CITY ORDINANCES AND STANDARDS. IN THE EVENT OF A CONFLICT BETWEEN ANY PORTION OF THESE PLANS, STATE AND CITY STANDARDS, THE STANDARDS SHALL APPLY.

SURVEY NOTES

SURVEY PREPARED BY GEODECA, LLC, AND DATED 04/24/2024.

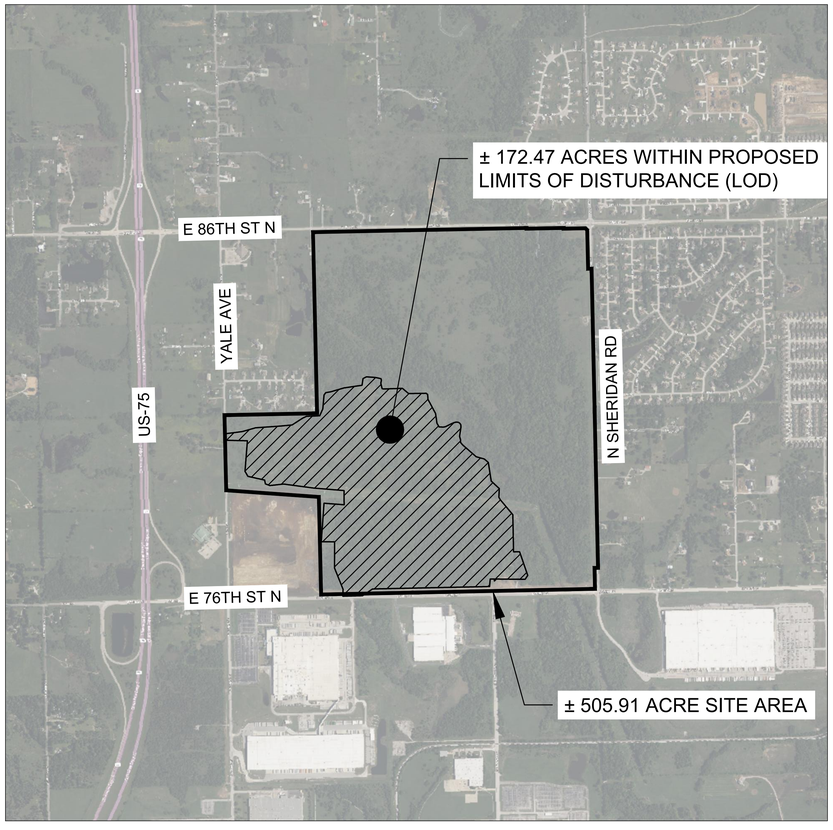
GEOTECHNICAL NOTES

ALL EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SITE GEOTECHNICAL REPORT PREPARED BY TERRACON IN SEPTEMBER 2025.

GROUND IMPROVEMENT AREAS DEPICTED ARE BASED ON DISCUSSIONS WITH GEOTECHNICAL AND OWNER TEAMS. FINAL CONFIRMATION FOR IMPROVEMENT DESIGN SHALL BE DETERMINED BY GEOTECHNICAL ENGINEERS AND OWNERSHIP TEAM.

CONFIDENTIAL

THIS DOCUMENT CONTAINS TRADE SECRETS AND COMMERCIAL/FINANCIAL INFORMATION - EXEMPT FROM DISCLOSURE UNDER PUBLIC INFORMATION ACT



VICINITY MAP
SCALE: 1" = 2000'

PERMITTING/UTILITY CONTACTS

ELECTRIC
PSO
212 E 6TH ST
TULSA, OK 74119
CONTACT: ADAM FIELDS
PH. (918) 250-6257

NATURAL GAS
ONG
5848 E 15TH ST
TULSA, OK 74112
CONTACT: JONATHAN MEADOWS
PH. (918) 831-8215

STORMWATER
TULSA COUNTY
218 W 6TH ST
TULSA, OK 74119
CONTACT: BERRY BRITTON
PH. (918) 596-5734

SANITARY SEWER
CITY OF TULSA
175 E 2ND ST
TULSA, OK 74103
CONTACT: CHRIS KOVAC
PH. (918) 596-9649

WATER
CITY OF TULSA
175 E 2ND ST
TULSA, OK 74103
CONTACT: CHRIS KOVAC
PH. (918) 596-6949

WATER
WASHINGTON COUNTY RWD #3
17227 N 129TH E AVE
COLLINSVILLE, OK 74021
CONTACT: JERRY GAMMILL
PH. (918) 371-2055

BUILDING DEPARTMENT
TULSA COUNTY
218 W 6TH ST
TULSA, OK 74119
CONTACT: TERESA TOSH
PH. (918) 596-5290

GRDA EASEMENT
GRDA
9933 E 16TH ST
TULSA, OK 74128
CONTACT: SCOTT WOODWARD
PH. (918) 610-9712

811
Know what's below.
Call before you dig.

SHEET LIST TABLE

SHEET	SHEET NUMBER	SHEET TITLE
1	C-0000	TITLE SHEET
2	C-0001	GENERAL NOTES
3	C-1000	EXISTING CONDITIONS AND DEMOLITION PLAN - OVERALL
4	C-1101	EXISTING AND DEMOLITION PLAN
5	C-1102	EXISTING AND DEMOLITION PLAN
6	C-1103	EXISTING AND DEMOLITION PLAN
7	C-1104	EXISTING AND DEMOLITION PLAN
8	C-1105	EXISTING AND DEMOLITION PLAN
9	C-3000	MASS GRADING PLAN - OVERALL
10	C-3101	MASS GRADING PLAN
11	C-3102	MASS GRADING PLAN
12	C-3103	MASS GRADING PLAN
13	C-3104	MASS GRADING PLAN
14	C-3105	MASS GRADING PLAN
15	C-3400	STORMWATER PROFILES
16	C-3401	STORMWATER PROFILES
17	C-3500	STORMWATER DETAILS
18	C-3501	STORMWATER DETAILS
19	C-3502	STORMWATER DETAILS
20	C-3503	STORMWATER DETAILS
21	C-3504	STORMWATER DETAILS
22	C-3600	EXISTING DRAINAGE MAP
23	C-3601	PROPOSED DRAINAGE MAP
24	C-4000	EROSION CONTROL NOTES
25	C-4100	EROSION CONTROL PLAN - PHASE 1 OVERALL
26	C-4101	EROSION CONTROL PLAN - PHASE 1
27	C-4102	EROSION CONTROL PLAN - PHASE 1
28	C-4103	EROSION CONTROL PLAN - PHASE 1
29	C-4104	EROSION CONTROL PLAN - PHASE 1
30	C-4105	EROSION CONTROL PLAN - PHASE 1
31	C-4200	EROSION CONTROL PLAN - PHASE 2 OVERALL
32	C-4201	EROSION CONTROL PLAN - PHASE 2
33	C-4202	EROSION CONTROL PLAN - PHASE 2
34	C-4203	EROSION CONTROL PLAN - PHASE 2
35	C-4204	EROSION CONTROL PLAN - PHASE 2
36	C-4205	EROSION CONTROL PLAN - PHASE 2
37	C-4500	EROSION CONTROL DETAILS
38	C-4501	EROSION CONTROL DETAILS
39	C-4502	EROSION CONTROL DETAILS

TOTAL SHEETS: 39

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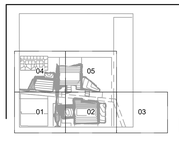
OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave,
Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING
(NOT FOR CONSTRUCTION)
2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:
APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

PROJ. NO.: 060007903

TITLE SHEET

SCALE: AS SHOWN

SHEET NUMBER:
C-0000

PAPER SIZE: E (36"x48")
PHASE:95% MG ISSUE FOR PERMIT

CONTRACTOR RESPONSIBILITIES:

1. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR:

   A. THE CONTRACTOR SHALL VERIFY ALL PROPOSED AND EXISTING CONDITIONS INCLUDING UTILITIES (INVERTS, CONNECTIONS, MATERIALS, ETC.) AND DIMENSIONS WITHIN THE LIMITS OF WORK PRIOR TO THE START OF CONSTRUCTION.

   B. THE CONTRACTOR IS RESPONSIBLE FOR ALL NOTIFICATIONS AND LIAISONS WITH UTILITY COMPANIES DURING THE PROCESS OF LOCATING AND RELOCATING PUBLIC UTILITIES.

   C. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITY, THE LIMITS OF LAND DISTURBANCE SHALL BE CLEARLY AND ACCURATELY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS. THE LOCATION AND EXTENT OF ALL AUTHORIZED LAND DISTURBANCE SHALL OCCUR INSIDE THE APPROVED LIMITS INDICATED ON THE APPROVED PLANS.

2. DURING CONSTRUCTION:

   A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER MAY CAUSE THE WORK TO BE UNACCEPTABLE.

   B. THE CONTRACTOR SHALL USE MATERIALS AND EMPLOY CONSTRUCTION METHODS IN ORDER TO COMPLY WITH THE DRAWINGS AND SPECIFICATIONS. WHERE A CONFLICT OCCURS, THE STRICTEST DESIGN SHALL GOVERN. THE ENGINEER'S REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC., DOES NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY SPECIFIC DEVIATIONS AND OBTAIN ENGINEER'S WRITTEN APPROVAL OF THE SPECIFIC DEVIATION.

   C. IT IS SOLELY THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.

   D. ALL CONSTRUCTION MUST CONFORM TO THE STANDARDS, SPECIFICATIONS, AND CODES OF THE GOVERNING MUNICIPALITIES.

   E. IF THE CONTRACTOR DAMAGES ANY EXISTING UTILITIES DURING CONSTRUCTION, HE SHALL, AT HIS OWN EXPENSE, REPLACE OR REPAIR THE UTILITIES TO ORIGINAL CONDITION AND QUALITY AS APPROVED BY THE OWNER AND REPRESENTATIVE OF THE APPROPRIATE UTILITY COMPANY.

   F. SUFFICIENT BARRICADES, LIGHTS, SIGNS, AND OTHER TRAFFIC CONTROL METHODS IN ACCORDANCE WITH GOVERNING ORDINANCES MAY BE NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC. SAID CONTROL DEVICES SHALL BE PER THE MANUAL OF TRAFFIC CONTROL DEVICES, M.U.T.C.D., CURRENT EDITION, AND SHALL BE PROVIDED AND MAINTAINED THROUGHOUT CONSTRUCTION.

   G. TRAFFIC CONTROLS AND OTHER WARNING DEVICES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORK ON CITY, COUNTY, OR OKLAHOMA DEPARTMENT OF TRANSPORTATION ROADS. THEY SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL THE CONCLUSION OF ALL WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AN APPROVED TRAFFIC CONTROL PLAN PRIOR TO COMMENCING WORK WITHIN A PUBLIC RIGHT OF WAY.

   H. ALL WARNING DEVICES SHALL BE EITHER TYPE I BARRICADES OR DRUMS WITH WARNING LIGHTS ON EVERY OTHER DEVICE. THEY SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION, AND ODOT STANDARDS FOR COLOR, SIZE, REFLECTIVITY, HEIGHT, AND PLACEMENT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AN APPROVED TRAFFIC CONTROL PLAN PRIOR TO COMMENCING WORK WITHIN A PUBLIC RIGHT OF WAY.

   I. FIRE DEPARTMENT ACCESS SHALL BE MAINTAINED AT ALL TIMES.

   J. CONTRACTOR SHALL SHORE AND BRACE ALL EARTH, FORMS, CONCRETE, STEEL, WOOD, AND MASONRY TO RESIST GRAVITY, EARTH, WIND, THERMAL, CONSTRUCTION, AND MISCELLANEOUS LOADS DURING CONSTRUCTION.

   K. ON-SITE BURIAL OF DEBRIS IS PROHIBITED.

   L. UNLESS OTHERWISE NOTED THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL FABRICATED MATERIALS TO THE ENGINEER. DESIGN DOCUMENTS SHALL NOT BE REPRODUCED AS SHOP DRAWINGS.

   M. IN CASE OF UNFORESEEN CONSTRUCTION COMPLICATIONS OR DISCREPANCIES, THE CONTRACTOR IS TO IMMEDIATELY NOTIFY THE ENGINEER IN WRITING.

   N. ALL REQUIRED TESTING REPORTS SHALL BE AVAILABLE AT THE JOB SITE.

   O. AS-BUILT DRAWINGS OF STORM DRAINS AND DETENTION PONDS, FIELD APPROVAL BY THE ENGINEER, AND ALL APPLICABLE BONDS ARE REQUIRED PRIOR TO FINAL ACCEPTANCE BY THE OWNER.

   P. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS TO ENSURE THAT THE NEW WORK SHALL FIT INTO THE EXISTING SITE IN THE MANNER INTENDED AND AS SHOWN ON THE DRAWINGS. SHOULD ANY CONDITIONS EXIST THAT ARE CONTRARY TO THOSE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO PERFORMING ANY WORK IN THE AREA INVOLVING DIFFERENCES. NOTIFICATION SHALL BE IN THE FORM OF A DRAWING OR SKETCH INDICATING FIELD MEASUREMENTS AND NOTES RELATING TO THE AREA.

   Q. ANY FOREIGN ITEM FOUND DURING CONSTRUCTION IS THE PROPERTY OF THE OWNER. THIS INCLUDES, BUT IS NOT LIMITED TO, PRECIOUS METALS, COINS, PAPER CURRENCY, ARTIFACTS AND ANTIQUITIES.

   R. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DONE TO THE PREMISES OR ADJACENT PREMISES, OR INJURIES TO THE PUBLIC DURING THE CONSTRUCTION OF THE WORK, WHETHER CAUSED BY HIMSELF, HIS SUBCONTRACTORS, OR THE CARELESSNESS OF ANY OF HIS EMPLOYEES.

   S. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN ALL NECESSARY TEMPORARY WORKS FOR THE PROTECTION OF THE WORK AND THE PUBLIC, INCLUDING BARRICADES, WARNING SIGNS, LIGHTS, ETC.

   T. THE CONTRACTOR ACKNOWLEDGES & AGREES THAT THE WORK IS ENTIRELY AT HIS RISK UNTIL SITE IS ACCEPTED, AND HE WILL BE HELD RESPONSIBLE FOR ITS SAFETY BY THE OWNER. THE CONTRACTOR WILL INDEMNIFY THE OWNER & OWNER'S REPRESENTATIVE FROM LIABILITY AT THE SITE THROUGHOUT THE CONSTRUCTION PROCESS.

   U. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES AND OBTAIN ALL PERMITS AND PAY ALL LEGAL FEES. THEY SHALL ALSO COMPLY WITH ALL CITY, COUNTY AND STATE BUILDING LAWS, ORDINANCES OR REGULATIONS RELATING TO THE PROJECT.

   V. THE CONTRACTOR IS TO CHECK AND VERIFY ALL MEASUREMENTS, LEVELS, ETC. BEFORE ORDERING MATERIALS AND PROCEEDING WITH THE WORK, AND IS TO BE RESPONSIBLE FOR THE SAME.

   W. REFERENCE POINTS AND HUBS DURING THE CONSTRUCTION OF THEIR WORK, AND SHALL BEAR THE COST OF REPLACING SAME.

   X. CARE SHALL BE TAKEN TO PROTECT ANY UTILITIES, TREES, ETC. WHICH ARE TO REMAIN AND NOT TO BE DISTURBED BY THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO SUCH PROPERTY.

   Y. ALL PUBLIC INFRASTRUCTURE IMPROVEMENTS TO BE INSPECTED BY THE CITY, COUNTY, OR RURAL WATER DISTRICT ENGINEERING DEPARTMENT. ENGINEERING DEPARTMENT WILL REQUIRE A MINIMUM OF THREE DAYS (72 HOURS) NOTICE FOR INSPECTION.

DEMOLITION INFORMATION:

1. NOTIFICATIONS:

   THE CONTRACTOR SHALL NOTIFY THE OWNER AND CITY INSPECTOR(S) 72 HOURS PRIOR TO ANY DEMOLITION OR CONSTRUCTION.

2. DISPOSAL GUIDELINES:

   A. ONLY ITEMS SPECIFICALLY NOTED TO BE DEMOLISHED SHALL BE REMOVED FROM THE SITE.

   B. REMOVE EXISTING PAVED AREAS AS SHOWN INCLUDING DRIVEWAYS, SIDEWALKS, PARKING AREAS, SERVICE AREAS, EQUIPMENT PADS, AND ALL MISCELLANEOUS PAVING.

   C. ALL DEBRIS RESULTING FROM DEMOLITION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY BY THE CONTRACTOR IN ACCORDANCE WITH LOCAL STATE AND FEDERAL REGULATIONS. BACKFILL ALL TRENCHES AND EXCAVATIONS RESULTING FROM DEMOLITION.

   D. ALL DEMOLISHED MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED.

3. TREE PROTECTION GUIDELINES:

   PROTECT ALL EXISTING TREES NOTED "TO REMAIN" AND ALL ITEMS TO BE TURNED OVER TO THE OWNER DURING DEMOLITION. TAKE ALL NECESSARY PRECAUTIONS AND PROTECTIVE MEASURES. ANY EXISTING ITEMS TO BE TURNED OVER TO THE OWNER WHICH ARE DAMAGED DURING DEMOLITION SHALL BE REPAIRED AT NO ADDITIONAL COST TO THE OWNER. TREES WHICH ARE DAMAGED WILL BE REPLACED OR REIMBURSED AT A RATE TO BE DETERMINED BY THE OWNER.

4. UTILITIES:

   A. PRIOR TO REMOVING OR ABANDONING ANY UTILITY THE CONTRACTOR SHALL VERIFY THAT NO UPSTREAM SERVICE WILL BE TERMINATED. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING OF ANY TERMINATION NOT SHOWN ON THE PLANS.

   B. ALL ABANDONED WATER LINES, STORM SEWER PIPE, SANITARY SEWER PIPES, GAS LINES, OR ANY OTHER ABANDONED UNDERGROUND UTILITY SHALL BE REMOVED AND THE RESULTING EXCAVATION BACKFILLED WITH ENGINEERED FILL UNLESS NOTED OTHERWISE.

SITE INFORMATION:

1. THE FOLLOWING ARE APPLICABLE TO ALL CIVIL DOCUMENTS:

   A. WHERE A DETAIL SECTION, TYPICAL SECTION, OR A NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL LIKE OR SIMILAR CONDITIONS, UNLESS OTHERWISE NOTED ON THE PLANS.

   B. EXISTING AND PROPOSED CONTOURS ARE AT ONE (1) FOOT INTERVALS.

   C. ALL PIPE LENGTHS SPECIFIED IN THESE PLANS ARE THE HORIZONTAL DISTANCE AND ARE SHOWN FOR REFERENE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE ACTUAL LENGTHS BASED ON PROPOSED PIPE SLOPE.

   D. PIPE LENGTHS IN PLANS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.

STORM SEWER NOTES:

1. REINFORCED CONCRETE PIPE SHALL BE RCP CLASS III UNLESS OTHERWISE NOTED WITH BELL-AND-SPIGOT AND GASKETED JOINTS WITH ASTM C 443 RUBBER GASKETS.
2. FILL HEIGHTS OVER 13' REQUIRE CLASS IV RCP STORM PIPE.
3. ON-SITE DRAINAGE STRUCTURES SHALL BE PRECAST TO MEET OR EXCEED ASTM C 478 AND ODOT SPECIFICATIONS.
4. ALL ON-SITE MANHOLE FRAMES AND COVERS ARE TO BE IN ACCORDANCE WITH ODOT STANDARD DETAILS.
5. MATERIAL: GRAY IRON ASTM A48 CLASS 30 UNLESS OTHERWISE INDICATED.
6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL STORM SEWER PIPE, STRUCTURES, AND DETENTION STRUCTURES FOR ENGINEER AND OWNER APPROVAL PRIOR TO ORDERING MATERIALS.

CLEARING AND GRUBBING:

A. DO NOT EXCEED LIMITS OF DISTURBANCE LINES INDICATED ON THE PLANS.

B. ALL AREAS OUTSIDE THE LIMITS OF DISTURBANCE LINE SHALL NOT BE CROSSED BY HEAVY EQUIPMENT OR USED FOR STORING HEAVY EQUIPMENT OR MATERIALS.

C. NO EQUIPMENT SHALL BE STORED UNDER THE DRIP LINE OF TREES TO REMAIN.

D. DO NOT FALL ANY TREES OR PUSH PILES OF DEBRIS AGAINST ANY TREES TO REMAIN.

E. REMOVE ALL STUMPS, ROCKS, ASPHALT & CONCRETE DEBRIS, ETC. AND DISPOSE OFF SITE IN ACCORDANCE WITH LOCAL, STATE & FEDERAL REGULATIONS.

F. CONTACT ALL UTILITY AUTHORITIES WHO HAVE LINES WITHIN THE LIMITS OF DISTURBANCE BEFORE STARTING WORK.

E. ALL EROSION CONTROL SEDIMENT BARRIERS, SILT FENCES, AND TREE PROTECTION DEVICES SHALL BE INSTALLED PRIOR TO STARTING CLEARING AND GRUBBING.

F. AFTER STAKING IS COMPLETED, TREES WITHIN GRADING LIMITS TO BE SAVED WILL BE IDENTIFIED BY THE OWNER'S REPRESENTATIVE. FIELD CHANGES TO GRADING PLANS SHALL BE MADE FOR SMOOTH TRANSITION OF GRADES AROUND ALL TREES WHICH REQUITE TREE WELLS WITHIN THE GRADING LIMITS.

G. ALL CLEARING SHALL BE LIMITED TO AREAS TO BE GRADED WITHIN 15 CALENDAR DAYS.

GRADING NOTES:

A. TOPSOIL SHALL BE STORED ON SITE IN LOCATIONS APPROVED BY THE OWNER'S REPRESENTATIVE. DRAINAGE SHALL ROUTE AROUND THESE TOPSOIL STOCKPILES FOR THE DURATION OF THE GRADING OPERATIONS. EROSION CONTROL MEASURES SHALL PREVENT THE LOSS OF TOPSOIL MATERIAL. REFER TO GEOTECHNICAL REPORT FOR TOPSOIL SPECS.

B. UNSUITABLE SOILS SHALL BE UNIFORMLY SPREAD ACROSS NON-STRUCTURAL FILL AREAS AND COVERED WITH AT LEAST 4" TOPSOIL AND SEEDED.

C. FILL AREA SHALL BE PROOF-ROLLED, UNDERCUT, AND RE-COMPACTED PER GEOTECHNICAL REPORT REQUIREMENTS.

D. CUT AREA SHALL BE PROOF-ROLLED, SCARIFIED, AND RE-COMPACTED PER GEOTECHNICAL REPORT REQUIREMENTS.

E. ALL GRADING SHALL BE COMPLETED TO THE LEVEL INDICATED BY THE SCOPE OF WORK LISTED IN THE LATEST VERSION OF THE APPROVED CONSTRUCTION DOCUMENTS.

F. ELEVATIONS SHOWN ON THE PLANS IS THE FINISH GRADE ELEVATION.

G. GRADING SHALL BE SEQUENCED SO THAT BASE STONE IS PLACED WITHIN 10 CALENDAR DAYS PF ACHIEVING OPTIMUM SUBGRADE COMPACTION.

H. SOILS TESTING LABORATORY/ SOILS ENGINEER. CONTRACTOR WILL EMPLOY A QUALIFIED SOILS TESTING LABORATORY/ ENGINEER TO OBSERVE THIS WORK AND MAKE TESTS AS REQUIRED.

I. HAVE EARTH BORROW FILL, AGGREGATE, AND TOPSOIL, AND STRUCTURAL FILL TESTED AND APPROVED BY DESIGNATED TESTING LABORATORY BEFORE MOVING IT TO THE JOB SITE.

J. CONTRACTOR SHALL OBSERVE PROOF-ROLLING OF AREAS WHERE FUTURE BUILDING AND PAVING WILL BE LOCATED TO DETERMINE ADEQUACY OF SOIL COMPACTION AND IN-PLACE SOILS. OTHER AREAS WILL BE INSPECTED BY SOILS ENGINEER TO DETERMINE ADEQUACY IN THOSE AREAS. IF SOILS ARE NOT ADEQUATE TO BEAR WEIGHTS THAT WILL BE IMPOSED, TESTING LABORATORY WILL OBSERVE AND REPORT CORRECTIVE ACTION TAKEN.

K. TEST IN-PLACE SOIL AND FILLED AND COMPACTED AREAS. IF THESE ARE NOT ADEQUATE TO BEAR WEIGHTS IMPOSED, TESTING LABORATORY WILL ADVICE THE OWNER'S REPRESENTATIVE OF THEIR RECOMMENDATIONS. HE WILL DIRECT ANY CORRECTIVE MEASURES THAT ARE NECESSARY.

L. SOILS COMPACTION TESTING OF IN-PLACE AND FILLED AND COMPACTED AREAS WILL BE PERFORMED BY TESTING LABORATORY IN ACCORDANCE WITH THEIR REQUIREMENTS.

M. THE SOILS ENGINEER'S AND TESTING LABORATORY'S FEES WILL BE PAID BY THE CONTRACTOR.

N. COMPACTED FILL SPECIFICATIONS SHALL BE PER GEOTECHNICAL REPORT REQUIREMENTS.

O. PROVIDE POSITIVE DRAINAGE AT ALL LOCATIONS UNLESS OTHERWISE NOTED.

P. CONTRACTOR SHALL REVIEW THE SITE SPECIFIC GEOTECHNICAL REPORT PRIOR TO COMMENCING WITH GRADING OPERATIONS. WHERE CONFLICTS BETWEEN THE GRADING NOTES AND GEOTECHNICAL REPORT EXIST, THE MORE STRINGENT REQUIREMENT SHALL APPLY.

ABBREVIATIONS:

A	AREA
AC	ACRES / ASPHALTIC CONCRETE
AD	ALGEBRAIC DIFFERENCE
ALT	ALTERNATE / ALTERNATIVE
AP	ANGLE POINT
ARCH.	ARCHITECTURE
B-B	BACK TO BACK
B/S	BACK SIDE
BC	BEGIN CURVE
BCR	BEGIN CURB RETURN
BLDG.	BUILDING
BMP	BEST MANAGEMENT PRACTICE
BOC	BACK OF CURB
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
CB	CATCH BASIN
CFS	CUBIC FEET PER SECOND
C/L	CENTERLINE
CONC	CONCRETE
CY	CUBIC YARD
D	DEPTH
DI	DUCTILE IRON / DROP INLET
DEMO	DEMOLITION
DCDA	DOUBLE CHECK DETECTOR ASSEMBLY
DIA	DIAMETER
DIST	DISTANCE
DOM.	DOMESTIC
DTL	DETAIL
DWG	DRAWING
E	EAST
E/W	EAST-WEST / EACH WAY
EA	EACH
EASE	EASEMENT
EC	END CURVE
ECR	END CURB RETURN
EG	EXISTING GROUND
EL	ELEVATION
ELEC	ELECTRICAL / ELECTRICITY
ELEV	ELEVATION
ESMT	EASEMENT
EPSC	EROSION PREVENTION AND SEDIMENT CONTROL
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EX.	EXISTING
F-F	FACE TO FACE
FDC	FIRE DEPARTMENT CONNECTION
FFE	FINISHED FLOOR ELEVATION
FG	FINISHED GROUND
FH	FIRE HYDRANT
FL	FLOW LINE
FO	FIBER OPTICS
FOC	FACE OF CURB
FT	FEET
FUT	FUTURE
GEO	GEOTECHNICAL
H	HORIZONTAL / HEIGHT
HDPE	HIGH DENSITY POLYETHYLENE
HGL	HYDRAULIC GRADE LINE
HP	HIGH POINT ELEVATION
HR	HOUR
IH	INTERSTATE HIGHWAY
IN	INCH
INV	INVERT
LA	LANDSCAPE AREA / LANDSCAPE ARCHITECT
LS	LANDSCAPE
LAT	LATERAL
LF	LINEAR FEET
LOD	LIMITS OF DISTURBANCE
LT	LEFT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINUTE / MINIMUM
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MPH	MILES PER HOUR
MTR	METER
MUTCD	MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
N	NORTH
N/S	NORTH-SOUTH
NAP	NOT A PART
NDOT	NEVADA DEPARTMENT OF TRANSPORTATION
NO.	NUMBER
N.O.I.	NOTICE OF INTENT
N.O.T.	NOTICE OF TERMINATION
NTS	NOT TO SCALE
OC	ON CENTER
OFF	OFFSET
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE/ POINT OF COMPOUND CURVATURE
PGL	PROPOSED GRADE LINE
PI	POINT OF INFLECTION
PIV	POST INDICATOR VALVE
PROP.	PROPOSED
PRC	POINT OF REVERSE CURVATURE
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INFLECTION
PVMT	PAVEMENT
REINF	REINFORCED
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
RPPA	REDUCED PRINCIPLE PRESSURE ASSEMBLY
RT	RIGHT
RTC	REGIONAL TRANSPORTATION COMMISSION
S	SOUTH / SLOPE
SD	STORM DRAIN
SF	SQUARE FEET
SPEC	SPECIFICATION
SQ	SQUARE
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
SY	SQUARE YARD
TELE	TELEPHONE
TC	TOP OF CURB
TM	TRUCKEE MEADOWS
WA	WATER AUTHORITY
TS	TRAFFIC SIGNAL
TYP	TYPICAL
UT	UTILITY
VERT.	VERTICAL
VAL	VALVE
VC	VERTICAL CURVE
W	WEST / WATER
WTP	WATER TREATMENT PLANT
WTR	WATER
YR	YEAR

811. Know what's below. Call before you dig.

C:\ACC\ACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-0001-GENERAL NOTES 6\17/2025 4:08 PM

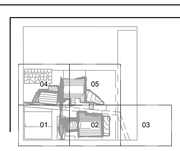
OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
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CIVIL:

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CYL1A 95% MASS GRADING
(NOT FOR CONSTRUCTION)
2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

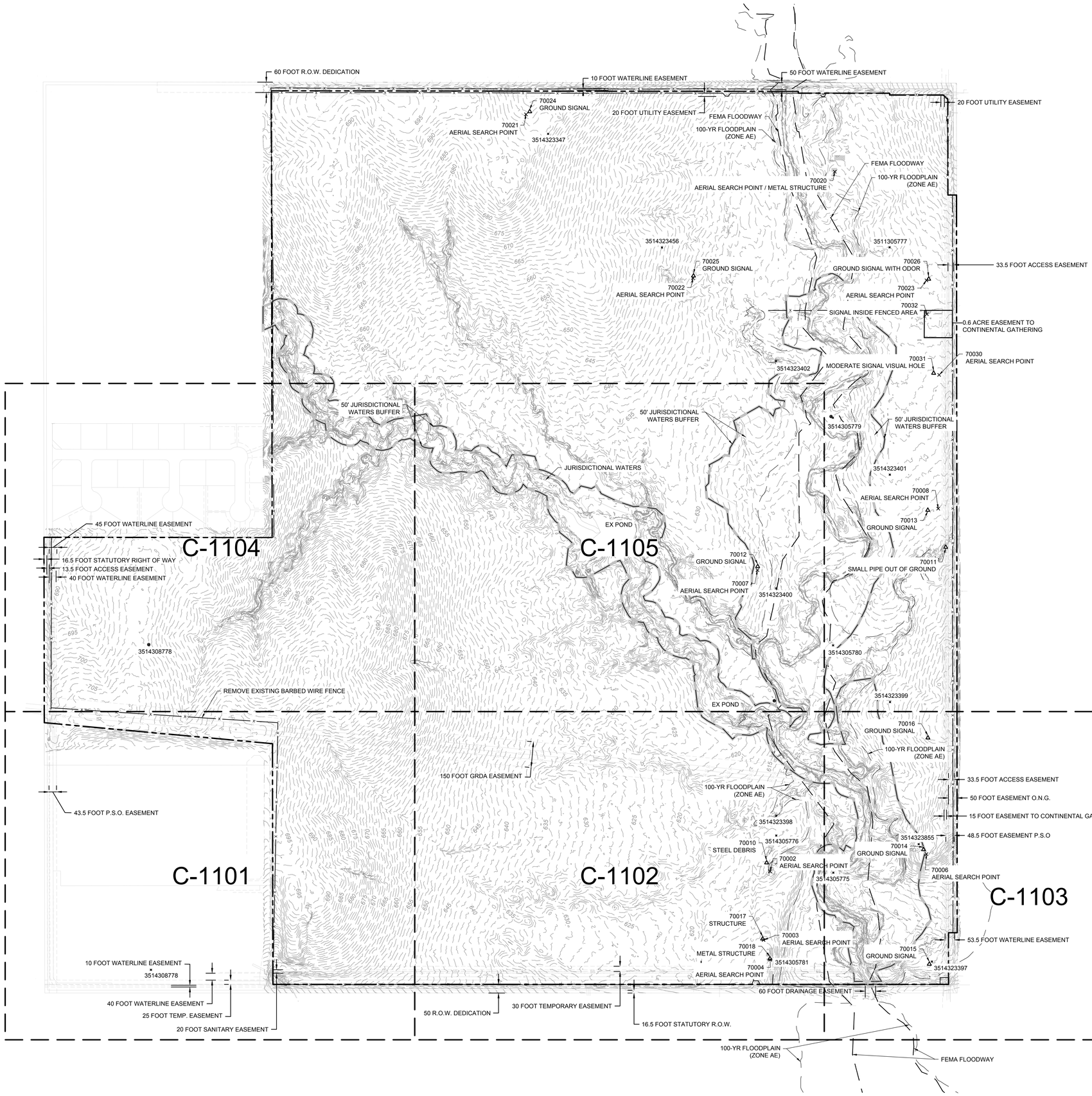
PROJ. NO.: 060007903

GENERAL NOTES

SCALE: NONE

SHEET NUMBER:
C-0001

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



LEGEND

- LOD — LIMITS OF DISTURBANCE
- 200 — EXISTING MAJOR CONTOUR (1' INTERVAL)
- 201 — EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY SEWER LINE
- ST — EXISTING STORM SEWER LINE
- EXISTING EASEMENT
- MATCHLINE
- FEMA FLOODWAY
- 100-YR FLOODPLAIN (ZONE AE)
- JURISDICTIONAL WATERS BUFFER
- FIELD LOCATED POSITION
- MAGNETIC ANOMALY
- OCC LOCATIONS
- EXISTING RIP RAP

NOTES

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API	WELL NAME	WELL #	OPERATOR	LATTITUDE	LONGITUDE	SYMBOL - CLASS
3511305777	MARTIN JOSEPH	1	OTC/OCC NOT ASSIGNED	36.265988	-95.904409	PLUGGED
3514305775	JOHNSON EVAN	1	OTC/OCC NOT ASSIGNED	36.275958	-95.903290	PLUGGED
3514305776	JOHNSON	4	OTC/OCC NOT ASSIGNED	36.268707	-95.905530	GAS
3514305778	MARTIN JOSEPH	2	OTC/OCC NOT ASSIGNED	36.268706	-95.947731	PLUGGED
3514305779	WEST GEO	1	OTC/OCC NOT ASSIGNED	36.273239	-95.904409	GAS
3514305780	JOHNSON EVAN	3	OTC/OCC NOT ASSIGNED	36.269613	-95.904409	PLUGGED
3514305781	WEST	2	OTC/OCC NOT ASSIGNED	36.275958	-95.905529	PLUGGED
3514308778	MARTIN J	3	OTC/OCC NOT ASSIGNED	36.269612	-95.917841	OTHER
3514323397	BCR	31	CONTINENTAL ENERGY OPERATING LLC	36.264567	-95.902470	PLUGGED
3514323398	BCR	32	CONTINENTAL ENERGY OPERATING LLC	36.266894	-95.905530	PLUGGED
3514323399	BCR	33	CONTINENTAL ENERGY OPERATING LLC	36.268707	-95.903290	PLUGGED
3514323400	BCR	34	CONTINENTAL ENERGY OPERATING LLC	36.270520	-95.905530	PLUGGED
3514323401	BCR	35	CONTINENTAL ENERGY OPERATING LLC	36.272333	-95.903290	PLUGGED
3514323402	BCR	36	CONTINENTAL ENERGY OPERATING LLC	36.274145	-95.905530	PLUGGED
3514323456	BCR	37	CONTINENTAL ENERGY OPERATING LLC	36.275958	-95.907770	PLUGGED
3514323471	BCR	46	CONTINENTAL ENERGY OPERATING LLC	36.277771	-95.910010	PLUGGED
3514323855	BIRDCREEK RANCH	31-A	CONTINENTAL ENERGY OPERATING LLC	36.266441	-95.902730	PLUGGED

MAGNETOMETER SURVEY ANOMALY LOCATIONS

70010	467549.7877	2585853.7450	STEEL DEBRIS
70011	469402.7872	2586854.5940	SMALL PIPE OUT OF GROUND
70012	469267.8549	2585766.3220	GROUND SIGNAL
70013	469615.2765	2586746.2610	GROUND SIGNAL
70014	467645.4732	2586762.1650	GROUND SIGNAL
70015	466981.1843	2586809.5070	GROUND SIGNAL
70016	468294.1756	2586774.2090	GROUND SIGNAL
70017	467107.7209	2585839.5360	STRUCTURE
70018	466993.3865	2585884.1070	METAL STRUCTURE
70020	471567.8730	2586166.3100	AERIAL SEARCH POINT/METAL STRUCTURE
70024	471880.1644	2584389.5810	GROUND SIGNAL
70025	470946.5757	2585359.1930	GROUND SIGNAL
70026	470956.4115	2586723.8170	GROUND SIGNAL WITH ODOR
70030	470401.4279	2586795.9670	AERIAL SEARCH POINT
70031	470410.8087	2586763.7820	MODERATE SIGNAL VISUAL HOLE
70032	470752.5053	2586717.4890	SIGNAL INSIDE FENCED AREA

Know what's below. Call before you dig.

N

0' 100' 200' 400'
SCALE IN FEET

C:\ACCACCDocs\Kimley-Horn\060057900_CYL1\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-1000 EXISTING CONDITIONS - OVERALL 6/17/2025 4:08 PM

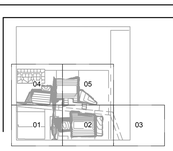
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CYL1A 95% MASS GRADING
(NOT FOR CONSTRUCTION)
2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

PROJ. NO.: 060007903

EXISTING CONDITIONS AND DEMOLITION PLAN - OVERALL

SCALE: 1" = 200'

SHEET NUMBER:
C-1000

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT

MATCHLINE SEE SHEET C-1104

REMOVE EXISTING BARBED WIRE FENCE
EXISTING OVERHEAD TRANSMISSION LINE
17.50 UTILITY EASEMENT
EXISTING ELECTRICAL TRANSMISSION TOWER
150.00 ELECTRICAL (GRDA) EASEMENT
PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC
ADJACENT PROPERTY BOUNDARY LINE
ADJACENT PROPERTY BOUNDARY LINE
ADJACENT PROPERTY BOUNDARY LINE
17.50 UTILITY EASEMENT
OVERLAND DRAINAGE AND STORMWATER DETENTION EASEMENT
17.50 SANITARY SEWER EASEMENT
REMOVE EXISTING BARBED WIRE FENCE
EXISTING SANITARY SEWER LINE
OVERLAND DRAINAGE AND STORMWATER DETENTION EASEMENT
25.00 TEMPORARY SANITARY SEWER CONSTRUCTION EASEMENT
EX. SSMH
TR=663.71
Shelf=657.06
FL(E)=656.61
FL(N)=656.66
20.00 SANITARY SEWER EASEMENT
16.50 STATUTORY RIGHT OF WAY
43.50 P.S.O. EASEMENT
20.00 WATERLINE EASEMENT
13.50 ACCESS EASEMENT
10.00 UTILITY EASEMENT
EXISTING STORM SEWER FES
OVERLAND DRAINAGE AND STORMWATER DETENTION EASEMENT
3514308778
25.00 ACCESS EASEMENT
50.00 RIGHT OF WAY DEDICATION
40.00 WATER EASEMENT
25.00 TEMPORARY EASEMENT
20.00 UTILITY EASEMENT
10.00 WATER EASEMENT
16.50 STATUTORY RIGHT OF WAY
EXISTING RIP RAP
EXISTING STORM SEWER HEADWALL
EXISTING 42" CPP STORM SEWER PIPE
EXISTING GUTTER
EXISTING CURB
EXISTING 48" RCP STORM SEWER PIPE
EXISTING 15" CMP STORM SEWER PIPE
EXISTING GUTTER
EXISTING CURB
EX. SSMH
TR=665.42
Shelf=655.97
FL(E)=655.32
FL(W)=655.27
EXISTING WATERLINE. CONTRACTOR TO PROTECT IN PLACE.
EXISTING STORM SEWER INLET
EXISTING SANITARY SEWER LINE
EX. SSMH
TR=661.72
Shelf=654.48
FL(E,W)=653.97
REMOVE EXISTING BARBED WIRE FENCE
EXISTING UNDERGROUND TELECOM LINES

LEGEND

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- 201 — EXISTING MINOR CONTOUR (1' INTERVAL)
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- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY SEWER LINE
- ST — EXISTING STORM SEWER LINE
- EXISTING EASEMENT
- FEMA FLOODWAY
- 100-YR FLOODPLAIN (ZONE AE)
- JURISDICTIONAL WATERS BUFFER
- FIELD LOCATED POSITION
- MAGNETIC ANOMALY
- OCC LOCATIONS
- EXISTING RIP RAP

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MATCHLINE SEE SHEET C-1102

Know what's below. Call before you dig.

N

0' 30' 60' 120'
SCALE IN FEET

C:\ACCVACCDocs\Kimley-Horn\060057900_CYL1\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-1101 EXISTING AND DEMOLITION PLAN 6/17/2025 4:08 PM

OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
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CIVIL:

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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17

KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

PROJ. NO.: 060007903

EXISTING AND DEMOLITION PLAN

SCALE: AS SHOWN

SHEET NUMBER:
C-1101

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT

MATCHLINE SEE SHEET C-1105

MATCHLINE SEE SHEET C-1101

MATCHLINE SEE SHEET C-1103

EXISTING ELECTRICAL TRANSMISSION TOWER

PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC

EXISTING ELECTRICAL TRANSMISSION TOWER

150.00 ELECTRICAL (GRDA) EASEMENT

JURISDICTIONAL WATERS

EX POND

50' JURISDICTIONAL WATERS BUFFER

100-YR FLOODPLAIN (ZONE AE)

FEMA FLOODWAY

50' JURISDICTIONAL WATERS BUFFER

JURISDICTIONAL WATERS

EXISTING OVERHEAD ELECTRICAL TRANSMISSION LINES

EXISTING ELECTRICAL TRANSMISSION TOWER

100-YR FLOODPLAIN (ZONE AE)

EXISTING OVERHEAD ELECTRICAL TRANSMISSION LINE

3514323398

EXISTING OVERHEAD ELECTRICAL TRANSMISSION LINES

3514305776

70010
STEEL DEBRIS

70002
AERIAL SEARCH POINT

100-YR FLOODPLAIN (ZONE AE)

FEMA FLOODWAY

50' JURISDICTIONAL WATERS BUFFER

100-YR FLOODPLAIN (ZONE AE)

70017
STRUCTURE

70003
AERIAL SEARCH POINT

EXISTING BUILDINGS TO REMAIN

FEMA FLOODWAY

70018
METAL STRUCTURE

3514305781

70004
AERIAL SEARCH POINT

EX. SSMH
TR=627.07
Shelf=620.42
FL(E)=620.67
FL(W)=620.77

25.00 TEMPORARY SANITARY SEWER CONSTRUCTION EASEMENT

EXISTING SANITARY SEWER LINE

EXISTING BARBED WIRE FENCE

EXISTING SANITARY SEWER LINE

20.00 SANITARY SEWER EASEMENT

EXISTING OVERHEAD ELECTRICAL TRANSMISSION LINE

EX. SSMH
TR=626.20
Shelf=618.40
FL(E)=617.70
FL(W)=617.80

EXISTING WATERLINE

25.00 TEMPORARY EASEMENT

EX. SSMH
TR=621.00
Shelf=614.55
FL(E)=613.85
FL(W)=613.82

EX. SSMH
TR=624.17
Shelf=610.32
FL(W)=609.63
FL(E)=609.64

EX. SSMH
TR=608.51
Shelf=600.91
FL(W)=600.29
FL(E)=600.31

EX. SSMH
TR=648.47
Shelf=642.42
FL(E)=641.77
FL(W)=641.87

EXISTING FIRE HYDRANT

EX. SSMH
TR=637.58
Shelf=631.58
FL(E)=630.90
FL(W)=630.98

EXISTING TELECOM STRUCTURES

EXISTING TELECOM STRUCTURE

EXISTING FIREHYDRANT

EXISTING POWER POLE (TYP.)

EXISTING TELECOM STRUCTURE

REMOVE EXISTING GATE

REMOVE EXISTING BARBED WIRE FENCE

EXISTING UNDERGROUND TELECOM LINES

EXISTING POWER POLE (TYP.)

EXISTING OVERHEAD ELECTRICAL TRANSMISSION LINE

EXISTING POWER POLE (TYP.)

EXISTING CURB

EXISTING GUTTER

EXISTING 15" CMP STORM SEWER PIPE

EXISTING CURB

EXISTING GUTTER

EXISTING STORM SEWER INLET

50.00 RIGHT OF WAY DEDICATION

EXISTING STORM SEWER LINE

EXISTING TRAFFIC SIGNAL

EXISTING STORM SEWER INLET

EXISTING TELECOM STRUCTURE
EXISTING TRAFFIC EQUIPMENT

EXISTING TRAFFIC EQUIPMENT

EXISTING TELECOM STRUCTURE

EXISTING CURB

EXISTING GUTTER

EXISTING TRAFFIC SIGNAL

EXISTING STORM SEWER INLET

EXISTING 18" RCP STORM SEWER PIPE

100-YR FLOODPLAIN (ZONE AE)

EXISTING STORM SEWER INLET

EXISTING 15" CMP STORM SEWER PIPE

10.00 WATERLINE EASEMENT

EXISTING STORM SEWER INLET

10.00 WATERLINE EASEMENT

EXISTING 24" CMP STORM SEWER PIPE

50.00 RIGHT OF WAY DEDICATION

16.50 STATUTORY RIGHT OF WAY

EXISTING STORM SEWER INLET

EXISTING TELECOM STRUCTURES

10.00 WATERLINE EASEMENT

EXISTING STORM SEWER LINE

EXISTING STORM SEWER INLET

16.50 STATUTORY RIGHT OF WAY

50.00 RIGHT OF WAY DEDICATION

LEGEND

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811 Know what's below. Call before you dig.

N

0' 30' 60' 120'
SCALE IN FEET

C:\ACC\ACCDocs\Kimley-Horn\060057900_CYL1\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-1101 EXISTING AND DEMOLITION PLAN 6/17/2025 4:08 PM

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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17

KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

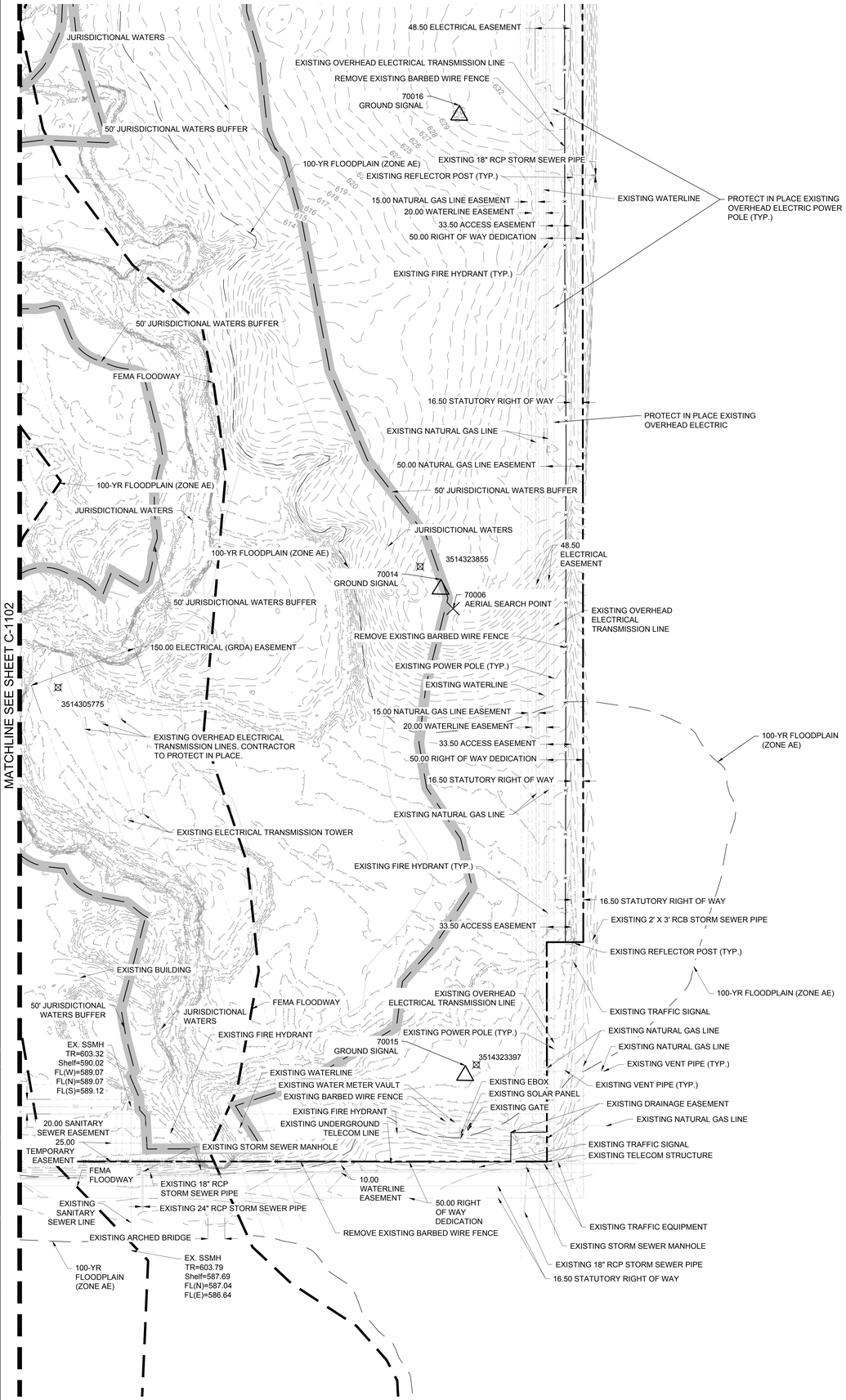
PROJ. NO.: 060007903

SCALE: AS SHOWN

EXISTING AND DEMOLITION PLAN

SHEET NUMBER:
C-1102

PAPER SIZE: E (36"x48")
PHASE:95% MG ISSUE FOR PERMIT



MATCHLINE SEE SHEET C-1102

C:\ACCACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-1101 EXISTING AND DEMOLITION PLAN 6/17/2025 4:08 PM

LEGEND

- LOD — LIMITS OF DISTURBANCE
- 200 — EXISTING MAJOR CONTOUR (1' INTERVAL)
- 201 — EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
- G — EXISTING GAS LINE
- W — EXISTING WATER LINE
- SS — EXISTING SANITARY SEWER LINE
- ST — EXISTING STORM SEWER LINE
- EXISTING EASEMENT
- FEMA FLOODWAY
- 100-YR FLOODPLAIN (ZONE AE)
- JURISDICTIONAL WATERS BUFFER
- FIELD LOCATED POSITION
- MAGNETIC ANOMALY
- OCC LOCATIONS
- EXISTING RIP RAP

NOTES

1. CONTRACTOR TO INSTALL ALL REQUIRED INITIAL EPSC MEASURES PER PLANS PRIOR TO ANY DEMOLITION OR CLEARING AND GRUBBING.
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811 Know what's below. Call before you dig.

N

0' 30' 60' 120'
SCALE IN FEET

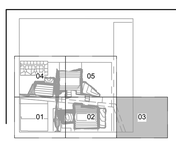
OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave, Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING
(NOT FOR CONSTRUCTION)
2025-09-17



KEYPLAN

REVISIONS			DRAWN:
NO.	DATE	DESCRIPTION	
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT	
			APPRV'D:

CYL1A

PROJECT ADDRESS:
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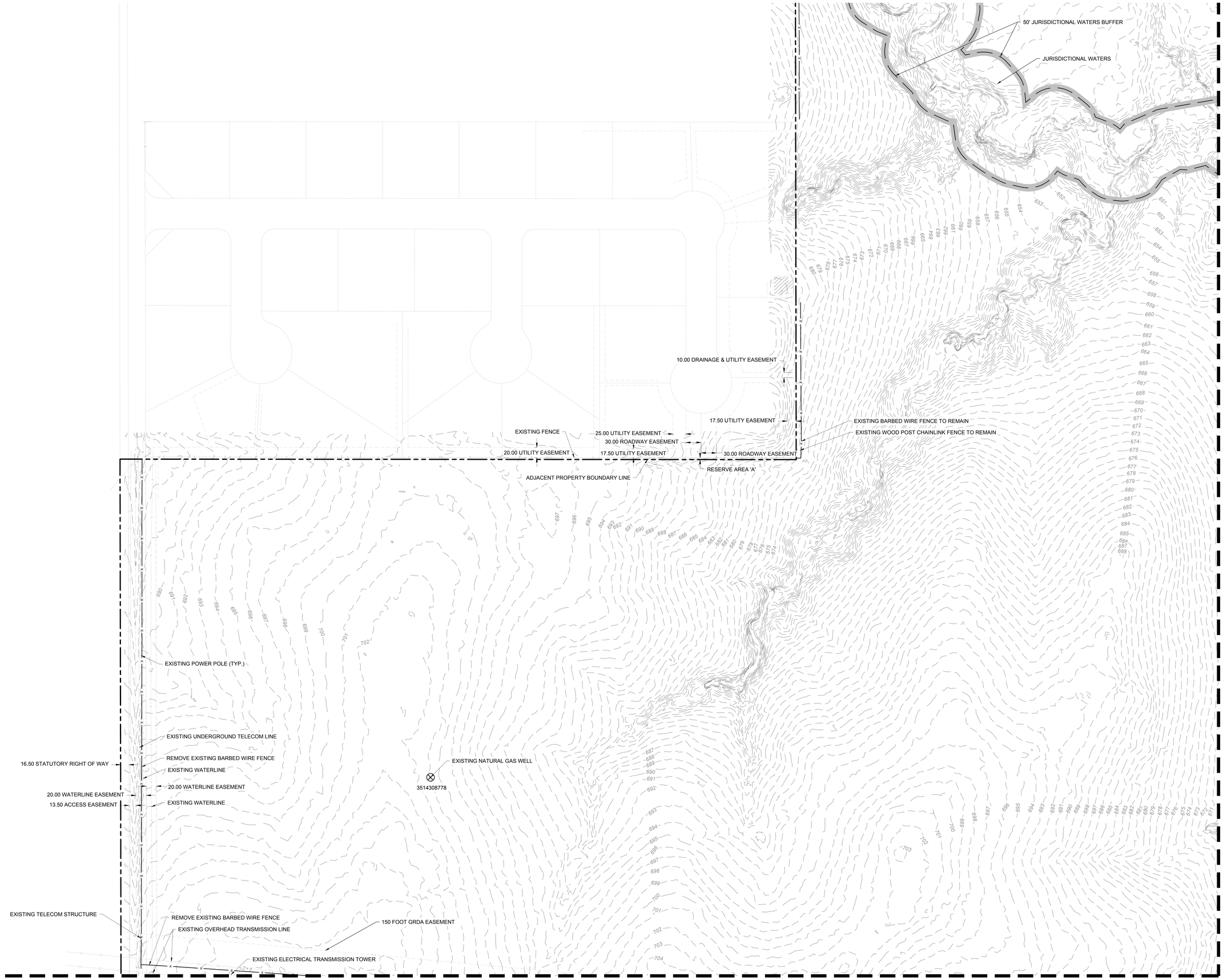
PROJ. NO.: 060057903

EXISTING AND DEMOLITION PLAN

SCALE: AS SHOWN

SHEET NUMBER:
C-1103

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



LEGEND

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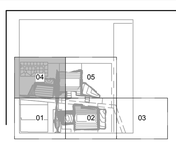
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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS		
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DRAWN:

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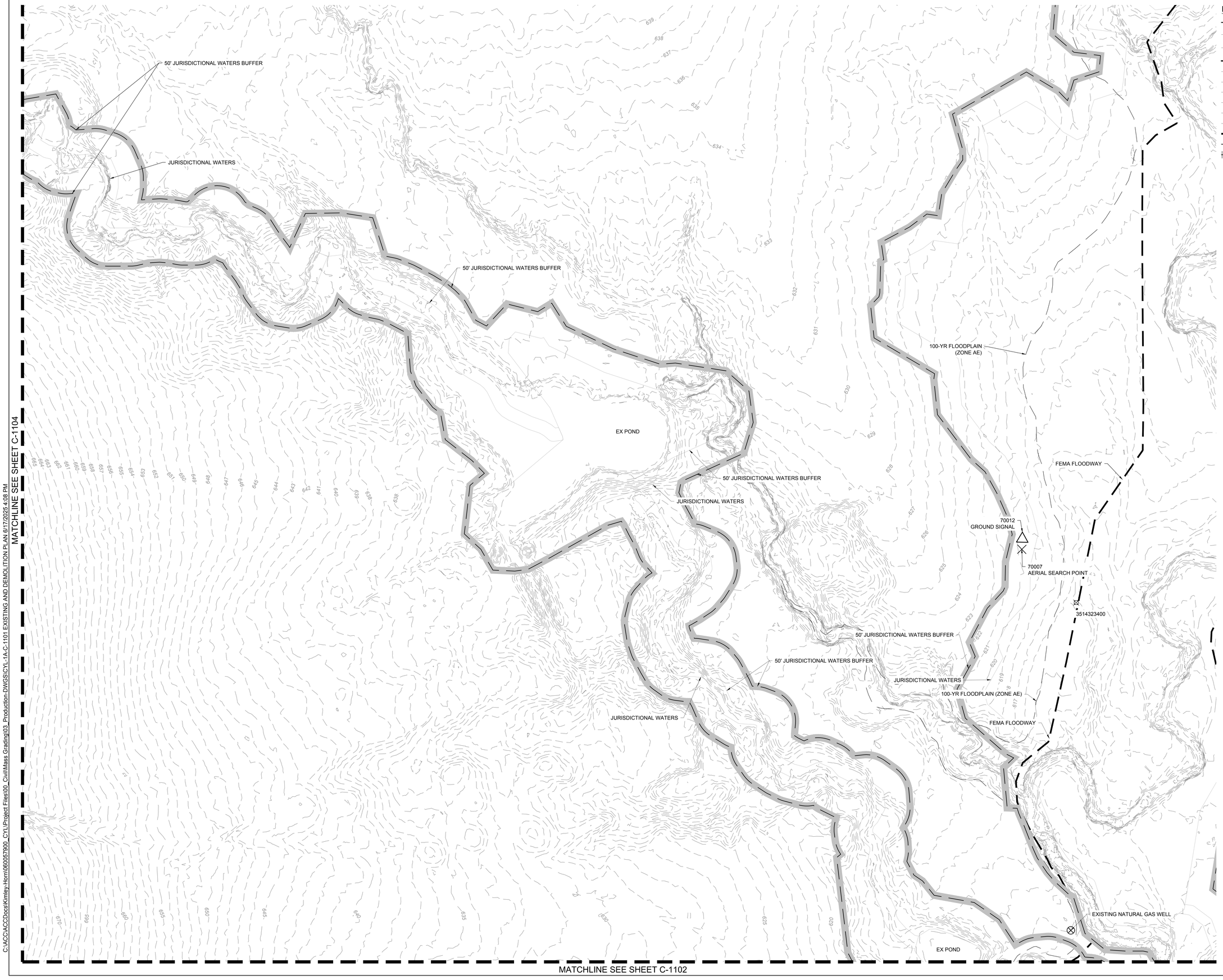
PROJ. NO.: 060007903

EXISTING AND DEMOLITION PLAN

SCALE: AS SHOWN

SHEET NUMBER:
C-1104

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



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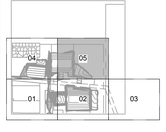
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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

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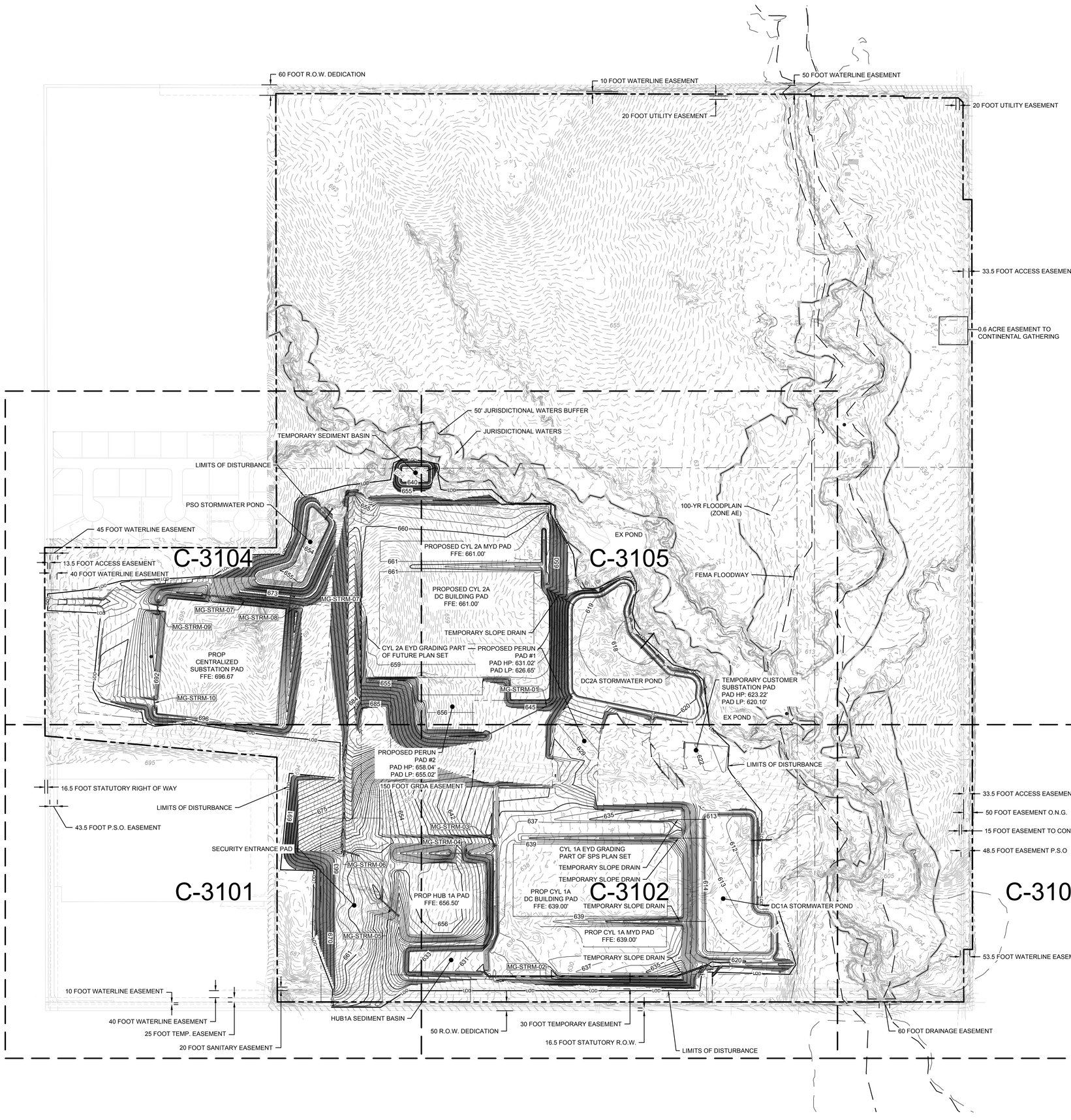
PROJ. NO.: 060007903

EXISTING AND DEMOLITION PLAN

SCALE: AS SHOWN

SHEET NUMBER:
C-1105

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



MASS GRADING EARTHWORK VOLUMES FOR DC1 AREA SOUTH OF THE GRDA EASEMENT (INCLUDING PERUN #1 AND THE TEMP SUB STATION)

Proposed Surface Compare Surface	Mass Grading* Existing		100% IFC (updated, DC1 FFE 640.00) (9/17/2025) per survey by Geodeca
Onsite Total Cut (raw from CADD, see note)	531,243	CY	Includes 12" of topsoil cut in logistic area outside the boundary of the surface on ~7 acres.
Onsite Total Fill (raw from CADD)	406,866	CY	

Earthwork			Notes
Strip and grub Existing Top Soil (BCY)	127,700	CY	Assumes 12" of topsoil cut
Stock pile and reuse top soils (excess beyond reuse must be disposed of off-site, see data below) (CCY)	24,900	CY	Assumes 6" of topsoil spread in vegetated areas of the site (slopes and ponds)
On-site Cut to Fill (CCY)	465,400	CY	Assumes average -7.5% shrinkage
Excess Topsoil Strippings for disposal on- or off-site (LCY)	154,200	CY	Assumes 50% swell on loose top soil
Import Granular Select Fill (BCY)	25,800	CY	24" Low volume change material under the DC1 and HUB Building Slabs
Import General Structural Fill from Off-site 3rd Party Source (CCY)	0	CY	
Export Excess Site Material for disposal on- or off-site (LCY)	20,100	CY	Assumes 35% swell on loose material

*Mass Grading surface is approximately 12" lower than the final surface in all areas to receive future pavement, stone, or slab, not including areas graded to drain.

MASS GRADING EARTHWORK VOLUMES FOR DC2 AREA NORTH OF THE GRDA EASEMENT (EXCLUDING THE PSO PAD WEST OF THE SPINE ROAD)

Proposed Surface Compare Surface	Mass Grading* Existing		100% IFC (updated, DC1 FFE 640.00) (9/17/2025) per survey by Geodeca
Onsite Total Cut (raw from CADD, see note)	558,165	CY	
Onsite Total Fill (raw from CADD)	380,255	CY	

Earthwork			Notes
Strip and grub Existing Top Soil (BCY)	79,700	CY	Assumes 12" of topsoil cut
Stock pile and reuse top soils (excess beyond reuse must be disposed of off-site, see data below) (CCY)	14,800	CY	Assumes 6" of topsoil spread in vegetated areas of the site (slopes and ponds)
On-site Cut to Fill (CCY)	419,200	CY	Assumes average -7.5% shrinkage
Excess Topsoil Strippings for disposal on- or off-site (LCY)	97,500	CY	Assumes 50% swell on loose top soil
Import Granular Select Fill (BCY)	23,000	CY	24" Low volume change material under the DC2 Bulding Slab
Import General Structural Fill from Off-site 3rd Party Source (CCY)	0	CY	
Export Excess Site Material for disposal on- or off-site (LCY)	144,000	CY	Assumes 35% swell on loose material

*Mass Grading surface is approximately 12" lower than the final surface in all areas to receive future pavement, stone, or slab, not including areas graded to drain.

MASS GRADING EARTHWORK VOLUMES FOR PSO PAD AREA AND PSO DETENTION POND (WEST OF THE SPINE ROAD)

Proposed Surface Compare Surface	Mass Grading* Existing		100% IFC (updated, DC1 FFE 640.00) (9/17/2025) per survey by Geodeca
Onsite Total Cut (raw from CADD, see note)	151,105	CY	
Onsite Total Fill (raw from CADD)	105,402	CY	

Earthwork			Notes
Strip and grub Existing Top Soil (BCY)	41,100	CY	Assumes 12" of topsoil cut
Stock pile and reuse top soils (excess beyond reuse must be disposed of off-site, see data below) (CCY)	12,700	CY	Assumes 6" of topsoil spread in vegetated areas of the site (slopes and ponds)
On-site Cut to Fill (CCY)	116,500	CY	Assumes average -7.5% shrinkage
Excess Topsoil Strippings for disposal on- or off-site (LCY)	42,700	CY	Assumes 50% swell on loose top soil
Import Granular Select Fill (BCY)	0	CY	
Import General Structural Fill from Off-site 3rd Party Source (CCY)	0	CY	
Export Excess Site Material for disposal on- or off-site (LCY)	9,125	CY	Assumes 35% swell on loose material

*The Mass Grading surface of the substation pad is 19" lower than the final surface in all areas to receive future stone base by PSO.

LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR (1' INTERVAL)
- EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- GRADE BREAK
- LIMIT OF DISTURBANCE
- EXISTING EASEMENT
- EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRIC
- BUILDING PAD
- MATCHLINE

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11. ALL GRADING AND EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FINAL GEOTECHNICAL ENGINEERING REPORT.

ENGINEER: TERRACON CONSULTANTS INC
ADDRESS: 9522 EAST 47TH PLACE, UNIT D
TULSA, OK 74145
PHONE: (918) 250-0461
DATE: TBD
JOB NO. 04245081

12. CONTRACTOR TO ENSURE POSITIVE DRAINAGE ON BUILDING AND LOGISTIC PAD IF THERE IS A CONSTRUCTION DELAY OF MORE THAN 30 DAYS WITH EXCEPTION OF ANY ZONE THAT REQUIRES SETTLEMENT MONITORING.

Know what's below. Call before you dig.

C:\ACC\ACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-3000 MASS GRADING PLAN - OVERALL 6/17/2025 4:08 PM

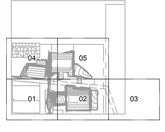
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MASS GRADING PLAN - OVERALL

SCALE: AS SHOWN

SHEET NUMBER:
C-3000

PAPER SIZE: E (36"x48")
PHASE:95% MG ISSUE FOR PERMIT

MATCHLINE SEE SHEET C-3104

MATCHLINE SEE SHEET C-3102

PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC

150 FOOT GRDA EASEMENT

LIMITS OF DISTURBANCE

PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC POWER POLE (TYP.)

MG-ST-PCES-005
INV IN: 657.00 (60" W)

MG-ST-HW-006
INV OUT: 657.72 (60" E)

91 LF 5' x 2' RCB @ 0.79%

MG-STRM-06

MG-ST-AI-004
INV OUT: 648.84 (60" SE)

SECURITY ENTRANCE PAD

MG-STRM-05

140 LF 5' x 3' RCB @ 0.50%

MG-ST-PCES-004
INV IN: 648.14 (60" NW)

16.5 FOOT STATUTORY R.O.W.

50 FOOT R.O.W. DEDICATION

25 FOOT TEMPORARY EASEMENT

40 FOOT WATERLINE EASEMENT

20 FOOT SANITARY EASEMENT

30 FOOT TEMPORARY EASEMENT

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- MATCHLINE
- POND CONCRETE SWALE
- DIRECTION OF FLOW
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- SETTLEMENT MONITORING HUB (SEE SHEET C-3503 FOR DETAIL)

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ENGINEER: TERRACON CONSULTANTS INC
ADDRESS: 9522 EAST 47TH PLACE, UNIT D
TULSA, OK 74145
PHONE: (918) 250-0461
DATE: TBD
JOB NO. 04245081

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N

0' 30' 60' 120'
SCALE IN FEET

C:\ACC\ACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-3101 MASS GRADING PLAN 9/18/2025 1:23 AM

OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
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Ph. (402) 399-1000

CIVIL:

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Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17

KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025-09-17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:
APPRV'D:

CYL1A
PROJECT ADDRESS: CONFIDENTIAL
PROJ. NO.: 060007903

MASS GRADING PLAN
SCALE: AS SHOWN

SHEET NUMBER:
C-3101
PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT

MATCHLINE SEE SHEET C-3105

MATCHLINE SEE SHEET C-3101

MATCHLINE SEE SHEET C-3103

MG-STRM-01
MG-ST-AI-001
RIM: 643.11
INV OUT: 635.56 (30" NE)
N: 468,362.37'
E: 2,584,097.36'
ELEV: 655.02
N: 468,356.80'
E: 2,583,827.42'
ELEV: 655.02
150 FOOT GRDA EASEMENT
PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC
PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC POWER POLE (TYP.)
N: 468,385.73'
E: 2,584,818.62'
ELEV: 626.65
PROP CYL 1A
PERUN PAD
PAD LP: 626.65
PAD HP: 631.02
N: 468,219.57'
E: 2,584,548.10'
ELEV: 631.02
N: 468,201.20'
E: 2,584,805.44'
ELEV: 628.50
N: 468,309.86'
E: 2,585,305.72'
ELEV: 622.50
N: 468,166.22'
E: 2,585,295.46'
ELEV: 623.22
PROP TEMPORARY CUSTOMER SUBSTATION PAD
LP: 620.10
HP: 623.22
EX POND
N: 468,292.77'
E: 2,585,545.11'
ELEV: 620.10
LIMITS OF DISTURBANCE
50' JURISDICTIONAL WATERS BUFFER
JURISDICTIONAL WATERS
FEMA FLOODWAY
100-YR FLOODPLAIN (ZONE AE)
N: 468,149.13'
E: 2,585,534.85'
ELEV: 620.82
N: 467,836.08'
E: 2,584,359.06'
ELEV: 637.16
N: 467,775.78'
E: 2,584,358.49'
ELEV: 637.16
PROP CYL 1A
EYD PAD
FFE: 637.16
TEMPORARY SLOPE DRAIN
SEE SHEET C-4501 FOR DETAILS
N: 467,852.74'
E: 2,585,186.88'
ELEV: 637.16
N: 467,792.45'
E: 2,585,187.74'
ELEV: 637.16
MG-ST-HW-003
INV OUT: 634.07 (60" S)
MG-STRM-03
MG-ST-HW-004
INV OUT: 641.25 (24" E)
MG-STRM-04
69 LF 5' x 3' RCB @ 0.53%
MG-ST-PCES-002
INV IN: 633.70 (60" N)
N: 467,713.79'
E: 2,584,332.78'
ELEV: 639.00
MG-ST-PCES-003
INV IN: 637.76 (24" W)
113 LF 24" CCP @ 3.11%
N: 467,514.54'
E: 2,583,819.33'
ELEV: 656.50
N: 467,531.85'
E: 2,583,882.99'
ELEV: 656.50
N: 467,533.21'
E: 2,583,948.48'
ELEV: 656.50
N: 467,438.39'
E: 2,583,982.44'
ELEV: 656.50
N: 467,418.38'
E: 2,583,885.33'
ELEV: 656.50
N: 467,274.41'
E: 2,583,888.30'
ELEV: 656.50
N: 467,276.42'
E: 2,583,985.78'
ELEV: 656.50
N: 467,417.06'
E: 2,583,821.35'
ELEV: 656.50
PROP HUB 1A PAD
FFE: 656.50
CONCRETE SWALE SEE SHEET C-3504 FOR DETAILS
N: 467,731.96'
E: 2,585,213.10'
ELEV: 639.00
TEMPORARY SLOPE DRAIN
SEE SHEET C-4501 FOR DETAILS
SM-1
SM-2
SM-3
SM-4
PROP CYL 1A
DC BUILDING PAD
FFE: 639.00
10' POND MAINTENANCE ACCESS ROAD
TEMPORARY SLOPE DRAIN
SEE SHEET C-4501 FOR DETAILS
N: 467,319.62'
E: 2,585,220.66'
ELEV: 639.00
N: 467,301.45'
E: 2,584,340.35'
ELEV: 639.00
N: 467,246.32'
E: 2,584,497.53'
ELEV: 639.00
PROP CYL 1A
MYD PAD
FFE: 639.00
N: 467,135.18'
E: 2,584,745.53'
ELEV: 639.00
N: 467,144.87'
E: 2,585,220.16'
ELEV: 639.00
N: 467,261.04'
E: 2,585,218.07'
ELEV: 639.00
N: 467,068.62'
E: 2,584,501.16'
ELEV: 638.15
N: 467,073.72'
E: 2,584,748.30'
ELEV: 637.77
MG-ST-HW-001
INV OUT: 629.68 (96" SE)
HUB1A SEDIMENT BASIN BOTTOM OF BASIN ELEVATION VARIES
41 LF 8' X 4' RCB @ 0.80%
MG-ST-BD-001
45° BEND
1067 LF 8' X 4' RCB @ 0.80%
MG-STRM-02
MG-ST-BD-002
45° BEND
203 LF 8' X 4' RCB @ 0.80%
MG-ST-HW-002
INV IN: 619.25 (96" W)
CONCRETE SWALE (TYP) SEE SHEET C-3504 FOR DETAILS
MG-ST-OR-001
INV OUT: 611.38 (12" E)
MG-ST-PCES-011
INV IN: 609.10 (36" W)
11 LF 36" CCP @ 1.30%
OS-001
INV IN: 611.30 (12" W)
INV OUT: 610.12 (36" E)
12" STW
N: 467,670.39'
E: 2,585,709.25'
N: 467,670.56'
E: 2,585,726.89'
EMERGENCY SPILLWAY. SEE C-3500 FOR DETAILS.
N: 467,530.59'
E: 2,585,729.78'
N: 467,530.41'
E: 2,585,711.94'
DC1A STORMWATER POND BOTTOM OF POND VARIES SEE SHEET C-3500 FOR POND DETAIL
16.5 FOOT STATUTORY R.O.W.
50 FOOT R.O.W. DEDICATION
25 FOOT TEMPORARY EASEMENT
40 FOOT WATERLINE EASEMENT
20 FOOT SANITARY EASEMENT
30 FOOT TEMPORARY EASEMENT

LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR (1' INTERVAL)
- EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- GRADE BREAK
- LOD — LIMIT OF DISTURBANCE
- EXISTING EASEMENT
- G — EXISTING GAS LINE
- OHE — EXISTING OVERHEAD ELECTRIC
- BUILDING PAD
- MATCHLINE
- POND CONCRETE SWALE
- DIRECTION OF FLOW
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- SETTLEMENT MONITORING HUB (SEE SHEET C-3503 FOR DETAIL)

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N

SCALE IN FEET 0' 30' 60' 120'

C:\ACCIACCDocs\Kimley-Horn\060057900_CYL1\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-3101 MASS GRADING PLAN 9/18/2025 1:23 AM

OTHER DISCIPLINES:

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CIVIL:

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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17

KEYPLAN

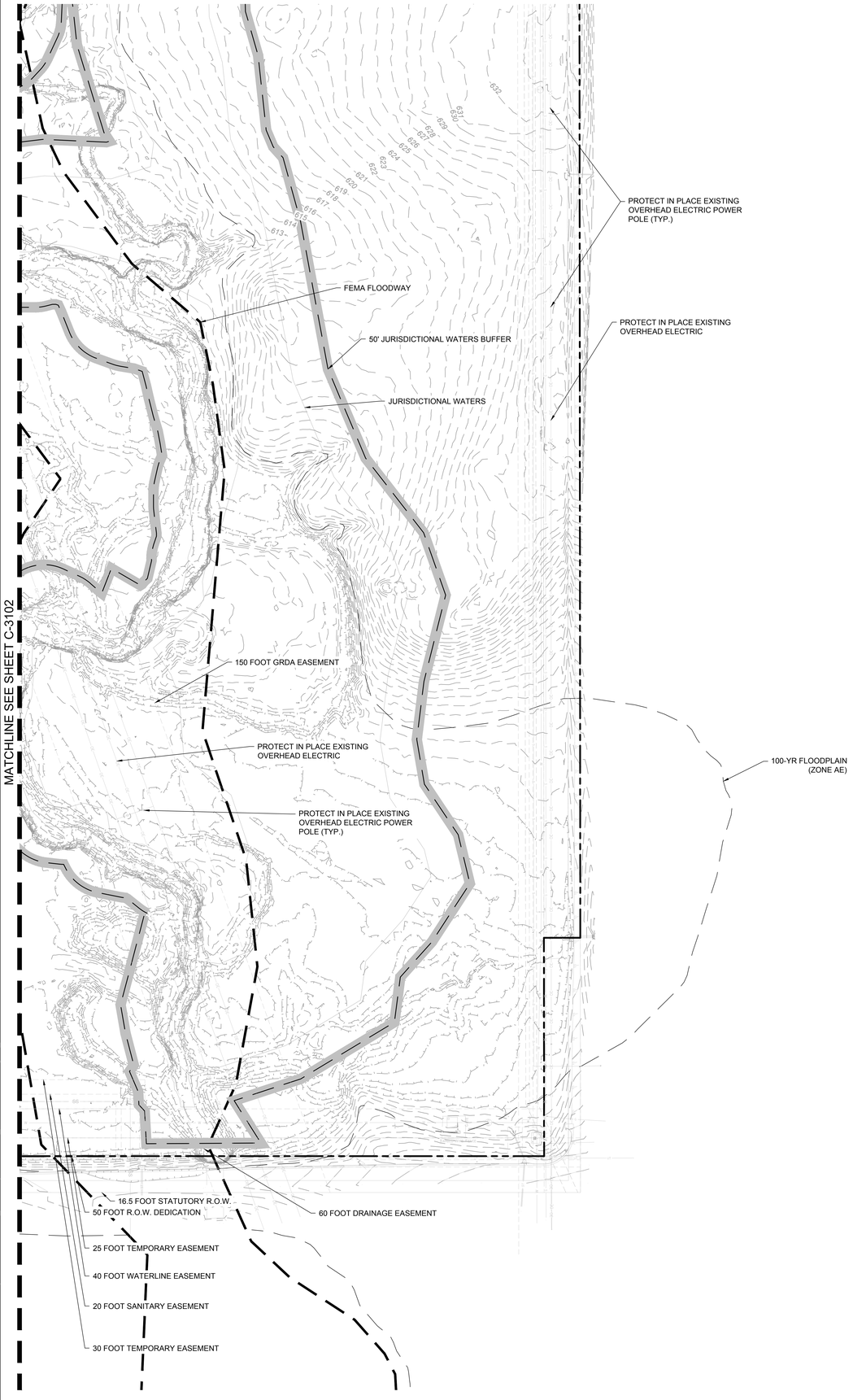
REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:
APPRV'D:

CYL1A
PROJECT ADDRESS: CONFIDENTIAL
PROJ. NO.: 060007903

MASS GRADING PLAN
SCALE: AS SHOWN

SHEET NUMBER: C-3102
PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



C:\ACCVACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-3101 MASS GRADING PLAN 9/18/2025 1:23 AM

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- POND CONCRETE SWALE
- DIRECTION OF FLOW
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- SETTLEMENT MONITORING HUB (SEE SHEET C-3503 FOR DETAIL)

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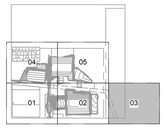
OTHER DISCIPLINES:

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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

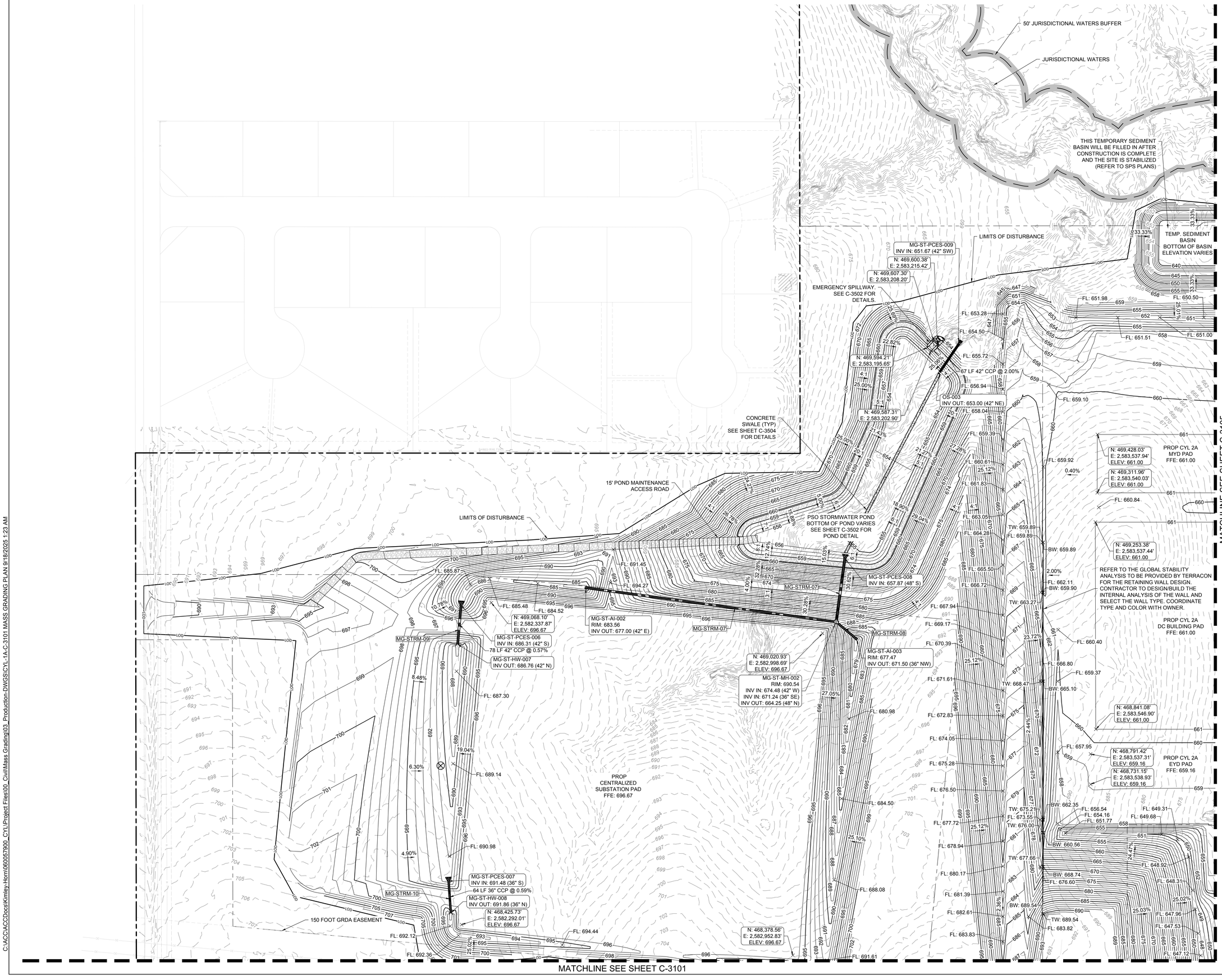
PROJ. NO.: 060007903

MASS GRADING PLAN

SCALE: AS SHOWN

SHEET NUMBER:
C-3103

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR (1' INTERVAL)
- EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
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- LIMIT OF DISTURBANCE
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MATCHLINE SEE SHEET C-3101

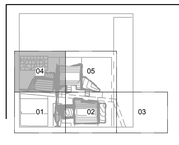
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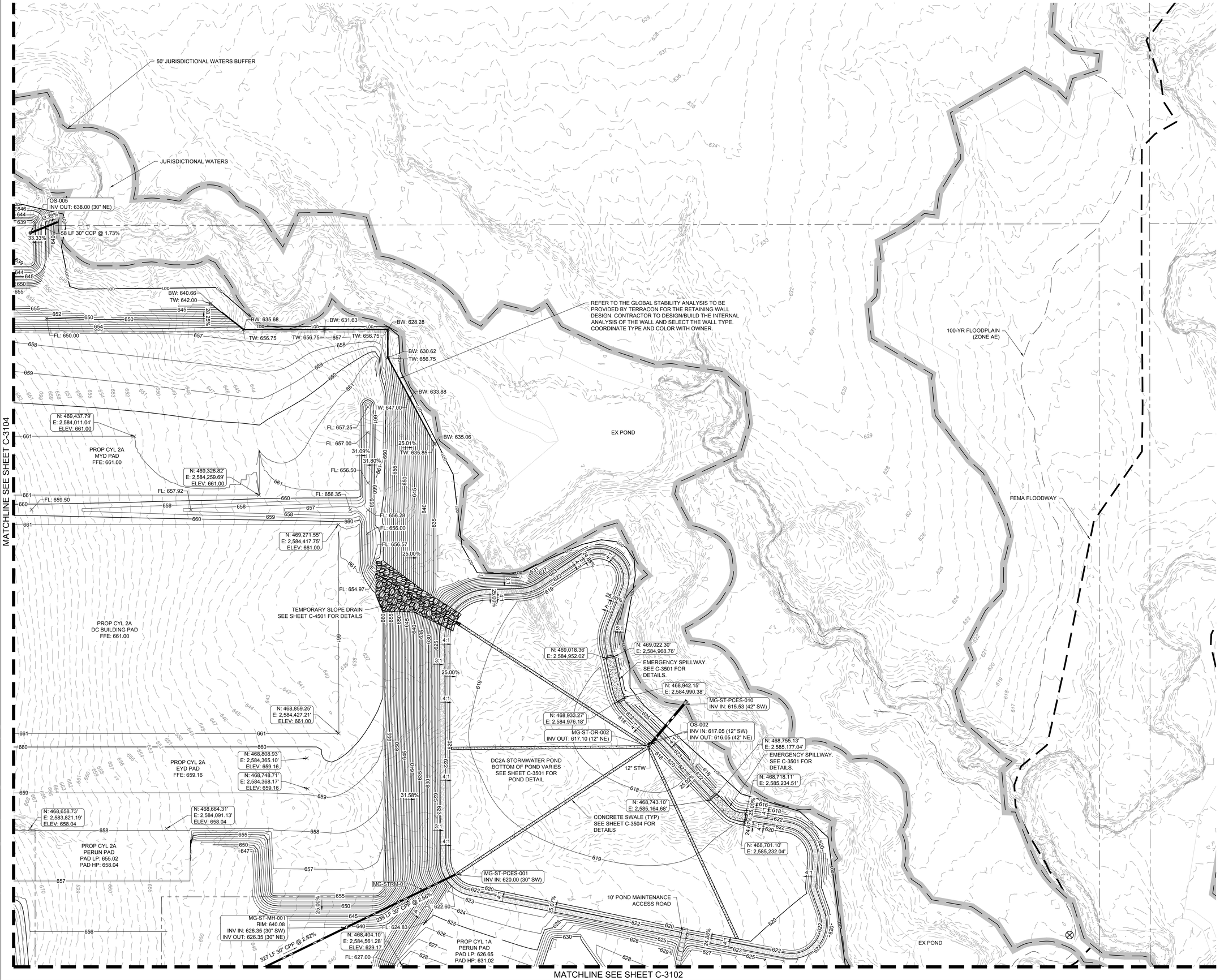
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SCALE: AS SHOWN

SHEET NUMBER:
C-3104

PAPER SIZE: E (36"x48")
PHASE:95% MG ISSUE FOR PERMIT



LEGEND

- PROPERTY LINE
- EXISTING MAJOR CONTOUR (1' INTERVAL)
- EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- GRADE BREAK
- LIMIT OF DISTURBANCE
- EXISTING EASEMENT
- EXISTING GAS LINE
- EXISTING OVERHEAD ELECTRIC
- BUILDING PAD
- MATCHLINE
- POND CONCRETE SWALE
- DIRECTION OF FLOW
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- SETTLEMENT MONITORING HUB (SEE SHEET C-3503 FOR DETAIL)

NOTES

1. CONTRACTOR TO INSTALL ALL REQUIRED INITIAL EPSC MEASURES PER PLANS PRIOR TO ANY DEMOLITION OR CLEARING AND GRUBBING.
2. CONTRACTOR TO REFER TO EROSION CONTROL PLANS FOR MITIGATION PLANTING AREAS AND DETAILS AS REQUIRED.
3. NO IMPACTS TO ANY IDENTIFIED JURISDICTIONAL ENVIRONMENTAL FEATURES OF ANY KIND IS PERMITTED UNTIL APPROVAL BY ODEQ AND USACE.
4. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS SHOWN ON PLAN AND IMMEDIATELY NOTIFY ENGINEER/OWNER OF ANY DISCREPANCIES.
5. FEATURES BEYOND THE LIMITS OF DISTURBANCE (LOD) AND WITHIN THE LOD, UNLESS IDENTIFIED FOR REMOVAL ON THE PLANS, SHALL BE PROTECTED IN PLACE (PIP) BY THE CONTRACTOR FOR THE DURATION OF THE WORK.
6. ANY EXISTING STRUCTURE, IMPROVEMENT, OR APPURTENANCE TO REMAIN THAT IS DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE IMMEDIATELY REPAIRED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
7. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS AND GUIDELINES OF THE EROSION CONTROL PLAN AND SITE SWPPP.
8. WHERE EXISTING GRADE IS AT A SLOPE STEEPER THAN ONE UNIT VERTICAL IN FIVE UNITS HORIZONTAL (20-PERCENT SLOPE) AND THE DEPTH OF THE FILL EXCEEDS 5 FEET, BENCHING SHALL BE PROVIDED.
9. CONTRACTOR TO SEE ABBREVIATIONS LIST (SEE SHEET C-0001), FOR CLARIFICATION.
10. CONTRACTOR TO ENSURE POSITIVE DRAINAGE. IF A CONFLICT OCCURS BETWEEN THESE PLANS AND FIELD CONDITIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
11. ALL GRADING AND EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FINAL GEOTECHNICAL ENGINEERING REPORT.

    ENGINEER: TERRACON CONSULTANTS INC
    ADDRESS: 9522 EAST 47TH PLACE, UNIT D TULSA, OK 74145
    PHONE: (918) 250-0461
    DATE: TBD
    JOB NO. 04245081

12. CONTRACTOR TO ENSURE POSITIVE DRAINAGE ON BUILDING AND LOGISTIC PAD IF THERE IS A CONSTRUCTION DELAY OF MORE THAN 30 DAYS WITH EXCEPTION OF ANY ZONE THAT REQUIRES SETTLEMENT MONITORING.
13. POTENTIAL OIL/GAS WELL LOCATIONS ARE DEPICTED ON THE PLANS IN APPROXIMATE LOCATIONS. PLUGGED WELLS ARE TYPICALLY LOCATED TWO (2) TO FIVE (5) FEET BELOW GRADE AND CONSIST OF A WELL CASING CAPPED WITH CONCRETE OR A WELDED METAL PLATE. CAUTION SHOULD BE USED DURING EXCAVATION IS AREAS WHERE KNOWN PLUGGED WELLS ARE BELIEVED TO BE PRESENT. IF A PLUGGED WELL IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, PLEASE CONTACT THE CONSTRUCTION SUPERINTENDENT AND ENGINEER OF RECORD TO DETERMINE APPROPRIATE ACTIONS. ADDITIONALLY, CARE SHOULD BE TAKEN TO AVOID DISTURBING THE WELL CASING AND CAP TO PRESERVE WELL INTEGRITY.

811 Know what's below. Call before you dig.

N

0' 30' 60' 120'
SCALE IN FEET

OTHER DISCIPLINES:	CIVIL:
HDR, Inc. 1917 South 67th Street Omaha, NE 68106 Ph. (402) 399-1000	Kimley-Horn Associates, Inc. 1437 S Boulder Ave, Suite 930 Tulsa, OK 74119 Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17

KEYPLAN

REVISIONS			DRAWN:
NO.	DATE	DESCRIPTION	
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT	
			APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

PROJ. NO.: 060007903

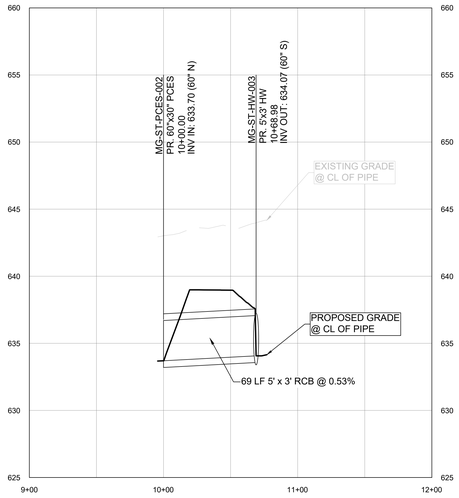
MASS GRADING PLAN

SCALE: AS SHOWN

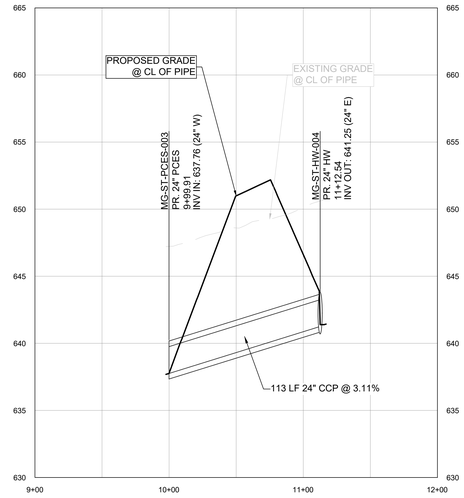
SHEET NUMBER:
C-3105

PAPER SIZE: E (36"x48")
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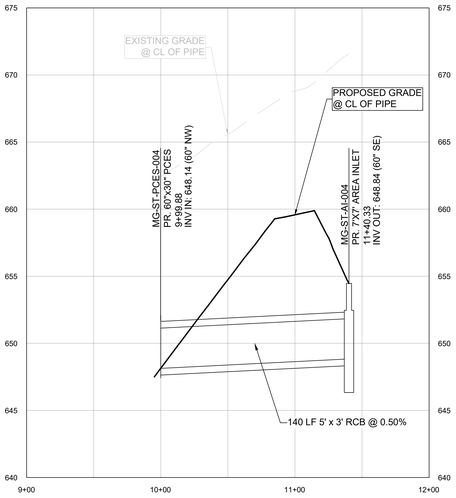
SCALE: 1"=40' HORIZONTAL
1"=4' VERTICAL



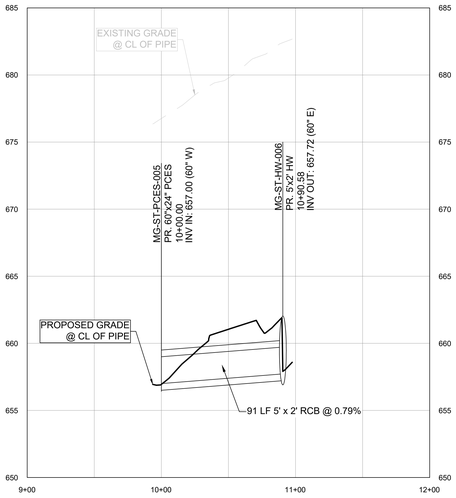
MG-STRM-03 PROFILE



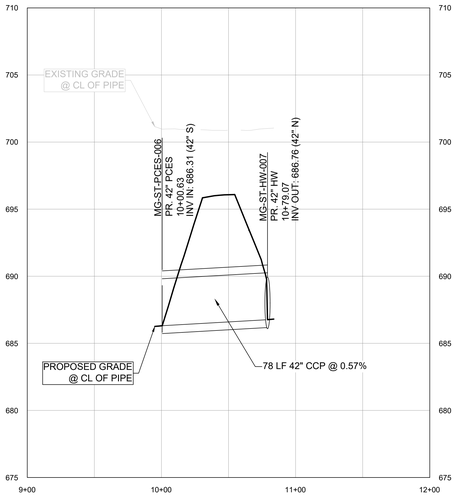
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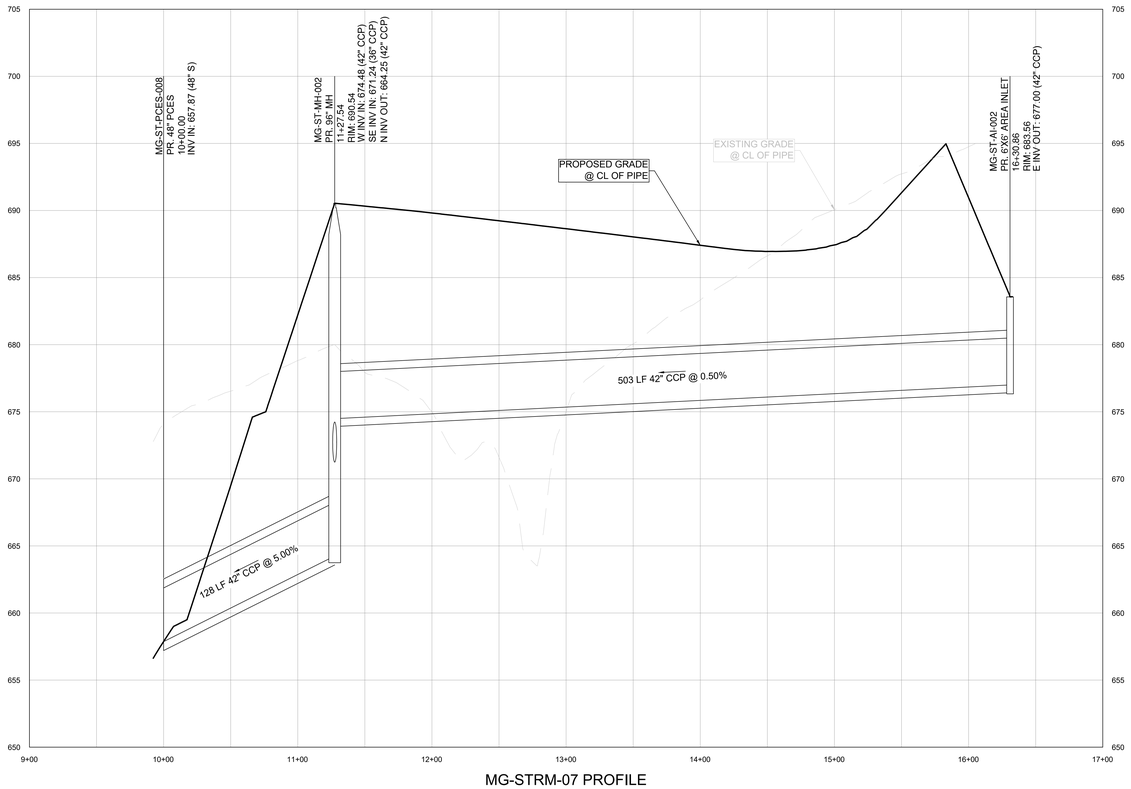
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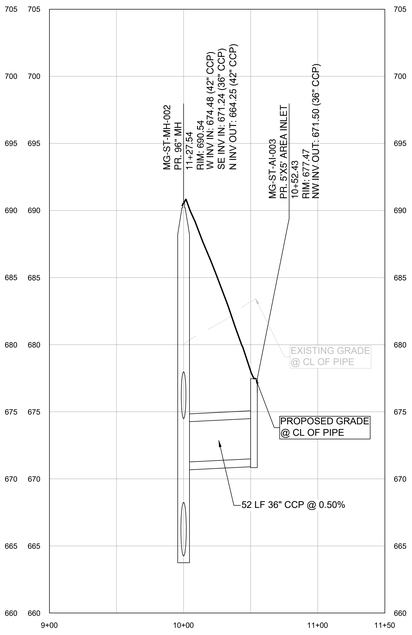
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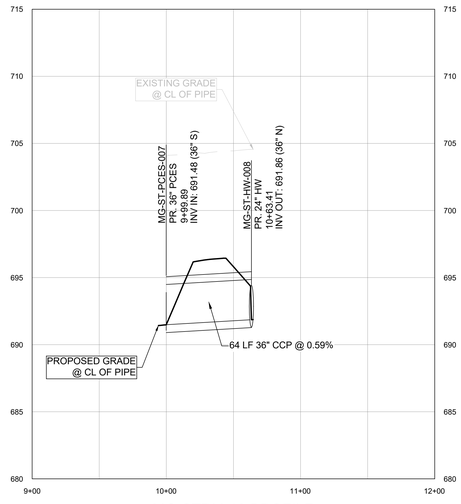
MG-STRM-09 PROFILE



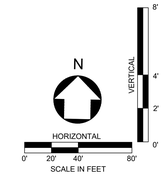
MG-STRM-07 PROFILE



MG-STRM-08 PROFILE



MG-STRM-10 PROFILE



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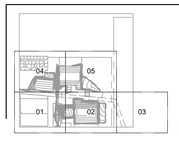
OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave,
Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

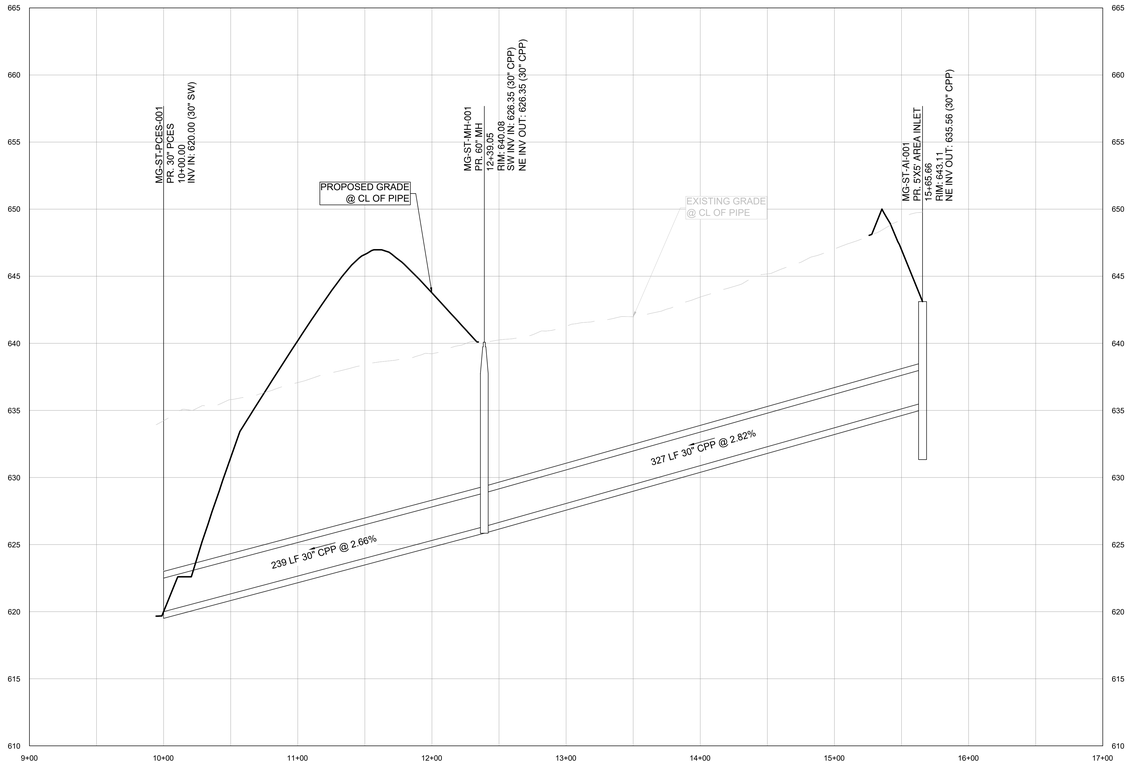
PROJ. NO.: 060007903

STORMWATER PROFILES

SCALE: AS SHOWN

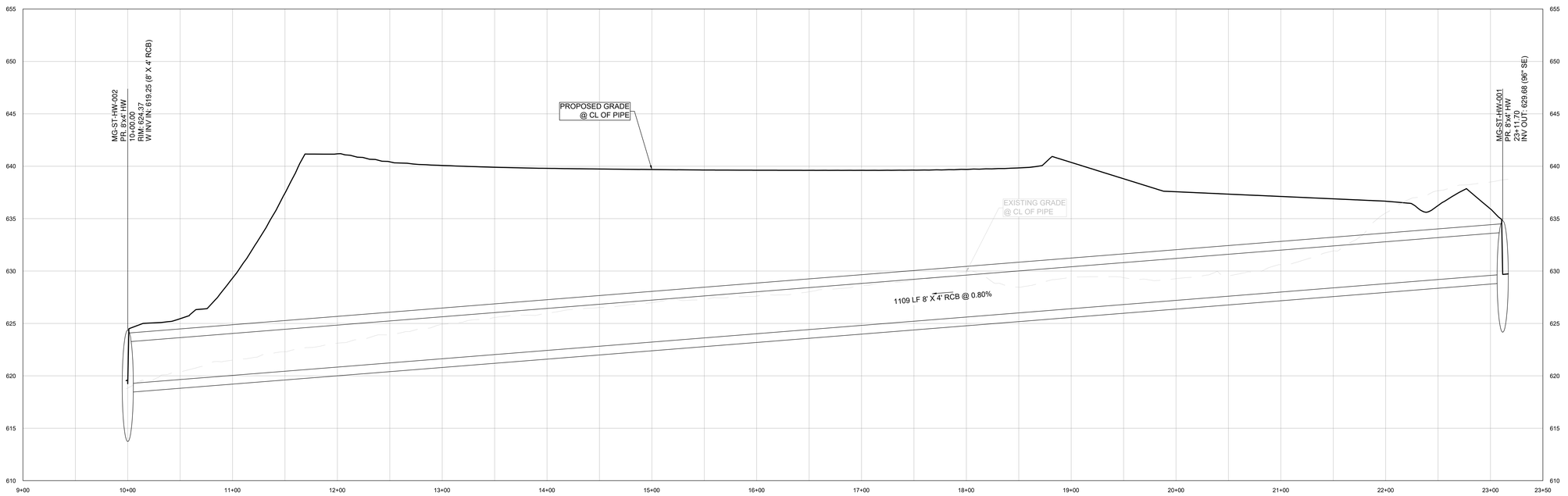
SHEET NUMBER:
C-3400

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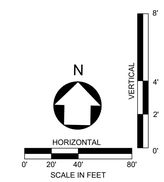


MG-STRM-01 PROFILE

SCALE: 1"=40' HORIZONTAL
1"=4' VERTICAL



MG-STRM-02 PROFILE



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OTHER DISCIPLINES:

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1917 South 67th Street
Omaha, NE 68106
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CIVIL:

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Suite 930
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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17

KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
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DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

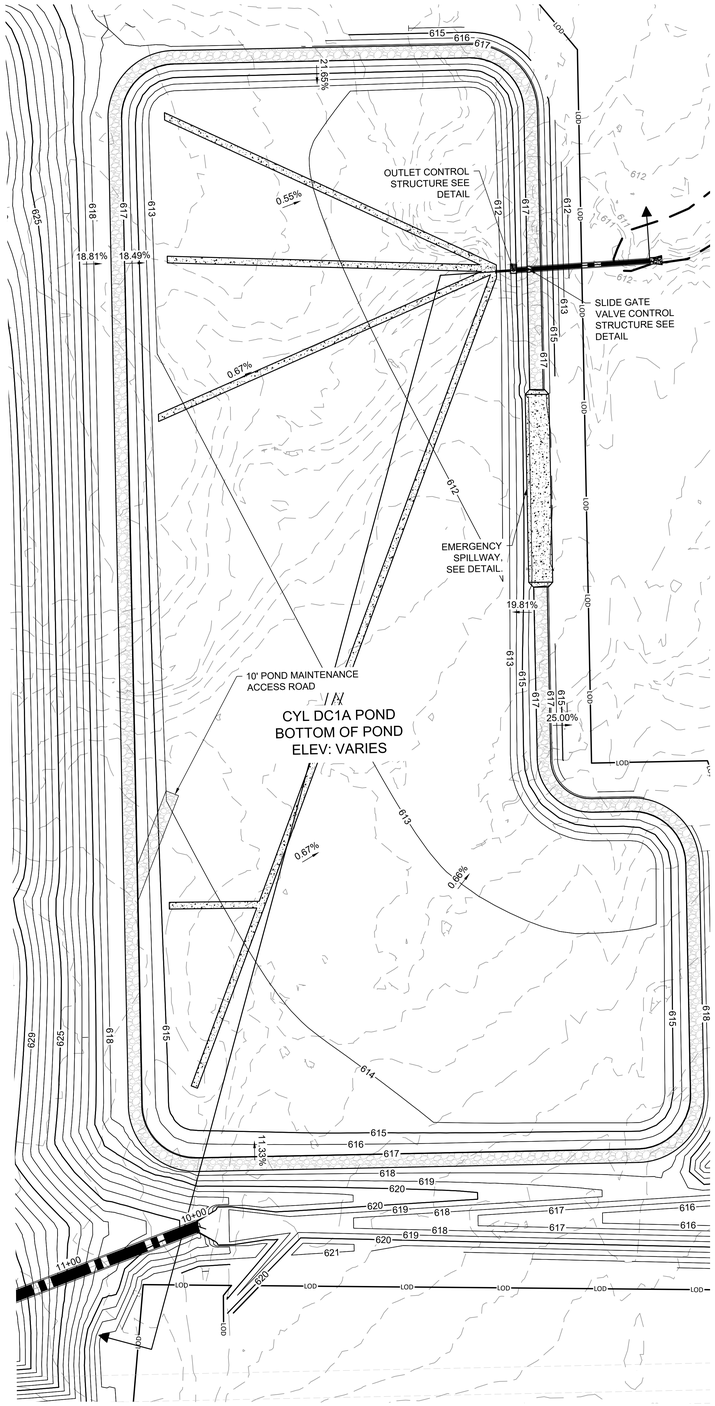
PROJ. NO.: 060007903

STORMWATER PROFILES

SCALE: AS SHOWN

SHEET NUMBER:
C-3401

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



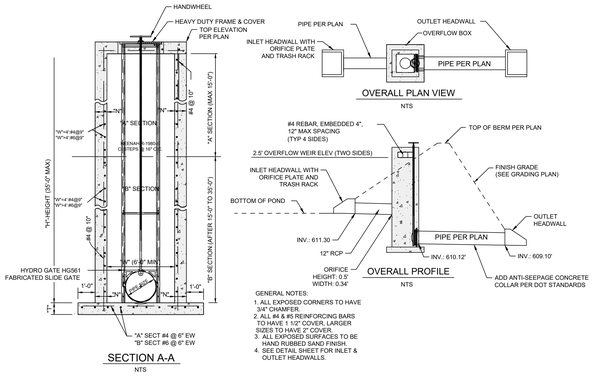


TABLE OF "W" DIMENSIONS				
PIPE SIZE	SKEW OF CROSS DRAIN			
	SINGLE	STRAIGHT	30°	45°
24"	4'-0"	4'-0"	4'-10"	
30"	4'-0"	4'-3"	5'-8"	
36"	4'-0"	5'-3"	6'-0"	
42"	5'-3"	5'-11"	7'-3"	
48"	5'-10"	6'-7"	8'-0"	
60"	7'-0"	7'-10"	9'-8"	

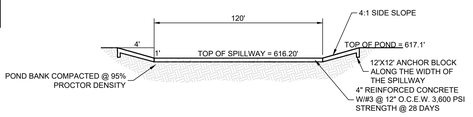
TABLE OF "T" & "N" DIMENSIONS		
SECTION	WIDTH ("W")	"T"
"A"	BETWEEN 4' & 7'	6" + PIPE THICKNESS
	GREATER THAN 7'	6" + PIPE THICKNESS
"B"	4'	6" + PIPE THICKNESS
	BETWEEN 4' & 7'	6" + PIPE THICKNESS

Composite Outfall Structure	
Opening #1	
Opening Type	Orifice
Flowline (ft)	611.30
Center Elevation (ft)	611.63
Height (ft)	0.50
Width (ft)	0.34
Area (sf)	0.17
Coefficient	0.60
Opening #2	
Opening Type	Weir
Elevation (ft)	614.50
Length (ft)	5.50
Coefficient	3.00

1 C-3500 OUTLET CONTROL STRUCTURE POND #1 DETAIL
NTS

P_DA_07B (DC1)			
Elevation (ft)	Area (sf)	Area (ac)	Volume (ac-ft)
611.3	0.00	0.00	0.00
612	29420.56	0.68	0.24
613	108522.80	2.49	1.82
614	192000.61	4.41	5.27
615	240420.60	5.52	10.23
616	254641.05	5.85	15.92
617	269531.92	6.19	21.93
617.1	276192.989	6.34	22.56

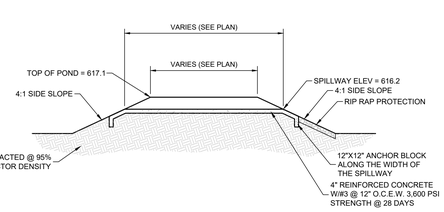
HEC-HMS Pond Results					
Pond ID	Storm Event	Volume (ac-ft)	Water Surface Elevation (ft)	Q_{in} (cfs)	Q_{out} (cfs)
P_DA_07B (DC1)	002-YR	7.4	614.5	128.8	1.4
	005-YR	8.9	614.8	161.9	4.0
	010-YR	10.1	615.0	191.7	7.6
	050-YR	13.4	615.6	275.6	20.5
	100-YR	16.6	616.2	360.2	36.9
25-YR, 6-hr Direct Runoff Volume:					12.7



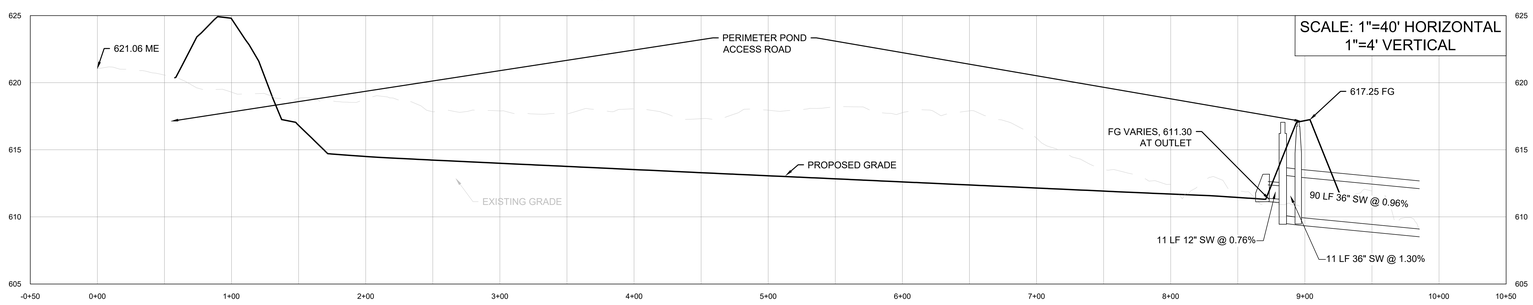
2 C-3500 EMERGENCY SPILLWAY PROFILE
NTS

P_DA_07B (DC1) Emergency Spillway	
$Q_{undetained}$ (cfs)	360.20
Rectangur Weir Coefficient, C_r	3
V-Notch Weir Coefficient, C_r	0.6
Length, L	140
Head Depth on Weir, H	0.9
Side Slope (H:V), S	4
Q_r (cfs)	358.60
Q_v (cfs)	7.89
$Q_{out} = Q_r + Q_v$ (cfs)	366.50
Bottom of Weir Elevation (ft)	616.20
Top Elevation (ft)	617.1

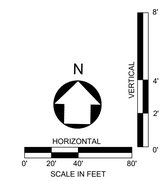
*$Q_{undetained}$ flows are based on the peak inflow into the detention pond



2 C-3500 EMERGENCY SPILLWAY CROSS SECTION
NTS



DC1 POND SECTION A-A



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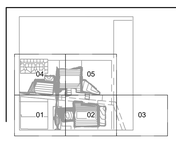
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CIVIL:

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1437 S Boulder Ave,
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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS: CONFIDENTIAL

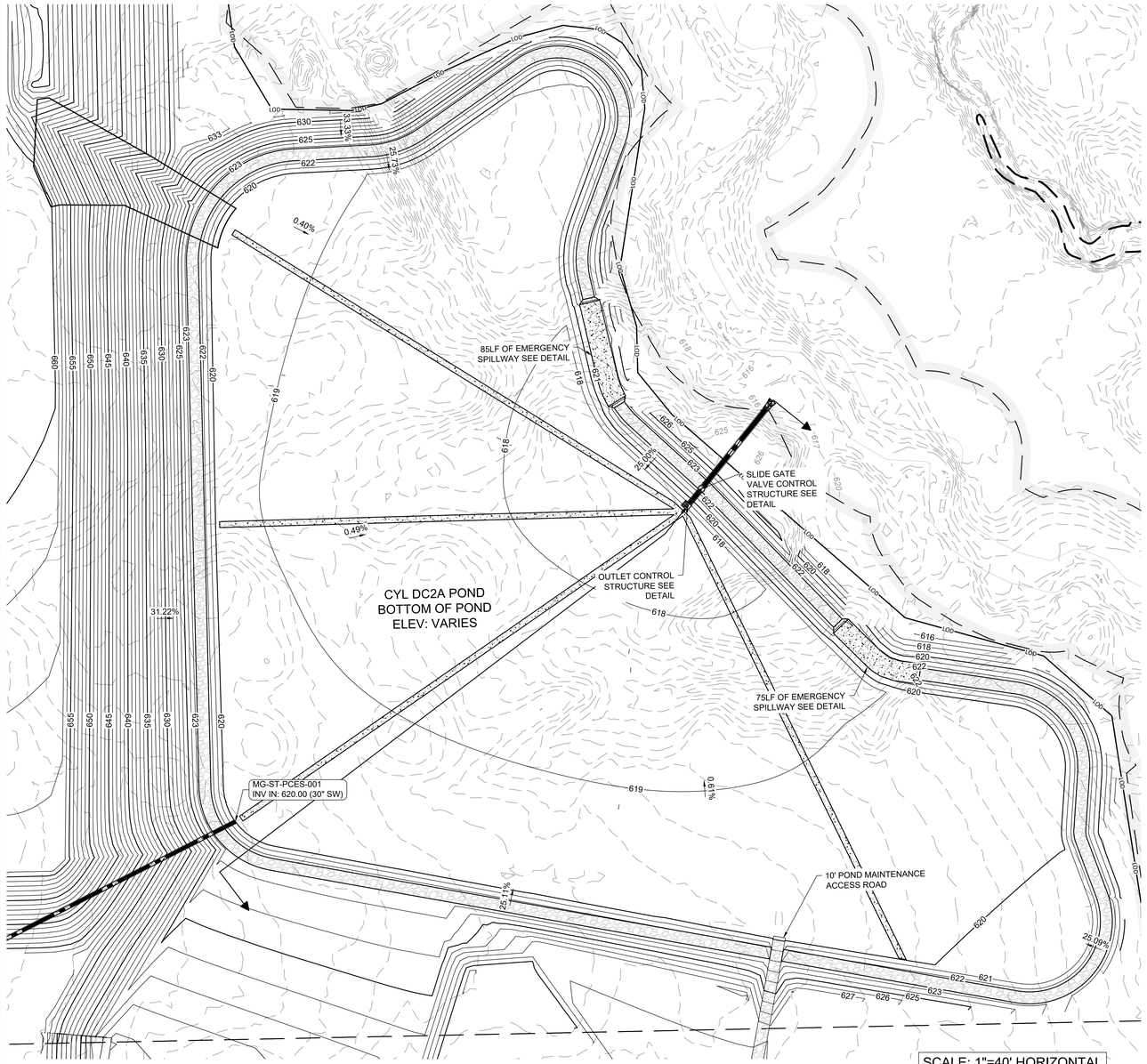
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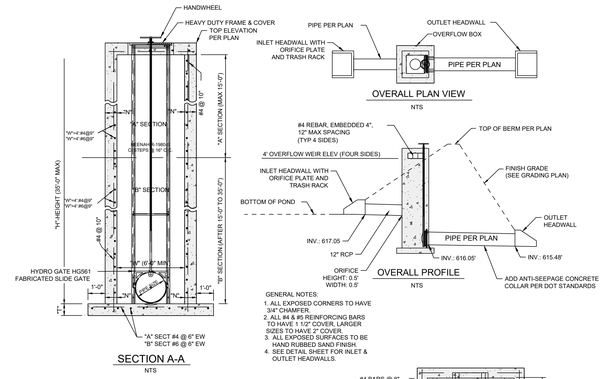
STORMWATER DETAILS

SCALE: AS SHOWN

SHEET NUMBER: C-3500

PAPER SIZE: E (36"x48")
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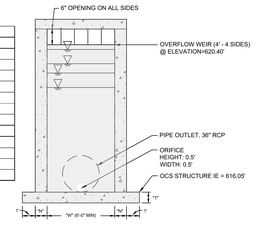
SECTION A-A
NTS

OVERALL PLAN VIEW
NTS

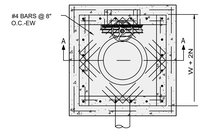
OVERALL PROFILE
NTS

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL #4 & #5 REINFORCING BARS TO HAVE 1 1/2" COVER, LARGER SIZES TO HAVE 2" COVER.
3. ALL EXPOSED SURFACES TO BE HAND RUBBED SAND FINISH.
4. SEE DETAIL SHEET FOR INLET & OUTLET HEADWALLS.

Composite Outfall Structure	
Opening #1	
Opening Type	Orifice
Flowline (ft)	617.05
Center Elevation (ft)	617.30
Height (ft)	0.50
Width (ft)	0.50
Area (sf)	0.25
Coefficient	0.60
Opening #2	
Opening Type	Weir
Elevation (ft)	620.40
Length (ft)	18.00
Coefficient	3.00



FRONT VIEW
NTS

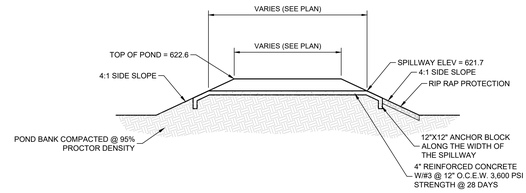


PLAN VIEW
NTS

TABLE OF 'W' DIMENSIONS			
PIPE SIZE	SKEW OF CROSS DRAIN		
SINGLE	STRAIGHT	30°	45°
24"	4'-0"	4'-0"	4'-10"
30"	4'-0"	4'-7"	5'-8"
36"	4'-0"	5'-3"	6'-5"
42"	5'-3"	5'-11"	7'-3"
48"	5'-10"	6'-7"	8'-0"
60"	7'-0"	7'-10"	9'-8"

TABLE OF "T" & "N" DIMENSIONS		
SECTION	WIDTH ("W")	"T"
"A"	BETWEEN 4' & 7'	6" + PIPE THICKNESS
	GREATER THAN 7'	6" + PIPE THICKNESS
"B"	4'	6" + PIPE THICKNESS
	BETWEEN 4' & 7'	6" + PIPE THICKNESS

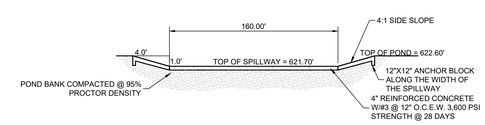
1 C350 OUTLET CONTROL STRUCTURE POND #2 DETAIL
NTS



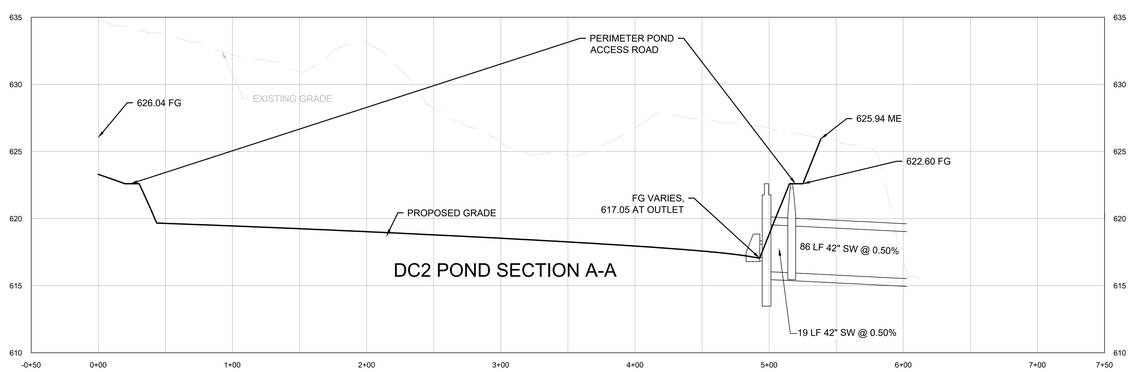
2 C350 EMERGENCY SPILLWAY CROSS SECTION
NTS

P_DA_09A (DC2) Emergency Spillway	
$Q_{unobstructed}$ (cfs)	406.40
Rectangur Weir Coefficient, C_r	3
V-Notch Weir Coefficient, C_v	0.6
Length, L	160
Head Depth on Weir, H	0.9
Side Slope (H:V), S	4
Q_r (cfs)	409.83
Q_v (cfs)	7.89
$Q_{spill} = Q_r + Q_v$ (cfs)	417.72
Bottom of Weir Elevation (ft)	621.70
Top Elevation (ft)	622.6

*$Q_{unobstructed}$ flows are based on the peak inflow into the detention pond

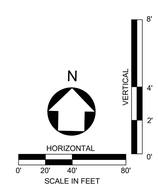


2 C350 EMERGENCY SPILLWAY PROFILE
NTS



P_DA_09A (DC2)			
Elevation (ft)	Area (sf)	Area (ac)	Volume (ac-ft)
617.05	0.00	0.00	0.00
618	32858.74	0.75	0.36
619	174181.83	4.00	2.73
620	295279.33	6.78	8.12
621	312948.78	7.18	15.10
622	323397.52	7.42	22.41
622.6	329222.01	7.56	26.90

HEC-HMS Pond Results					
Pond ID	Storm Event	Volume (ac-ft)	Water Surface Elevation (ft)	Q_{in} (cfs)	Q_{out} (cfs)
P_DA_09A (DC2)	002-YR	9.5	620.3	144.5	2.1
	005-YR	11.7	620.6	181.8	5.8
	010-YR	12.9	620.7	215.8	13.0
	050-YR	16.4	621.2	310.5	43.3
	100-YR	20.1	621.7	406.4	86.0
25-YR, 6-hr Direct Runoff Volume:				16.8	



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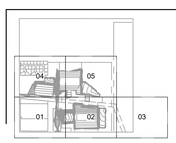
OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave,
Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS: CONFIDENTIAL

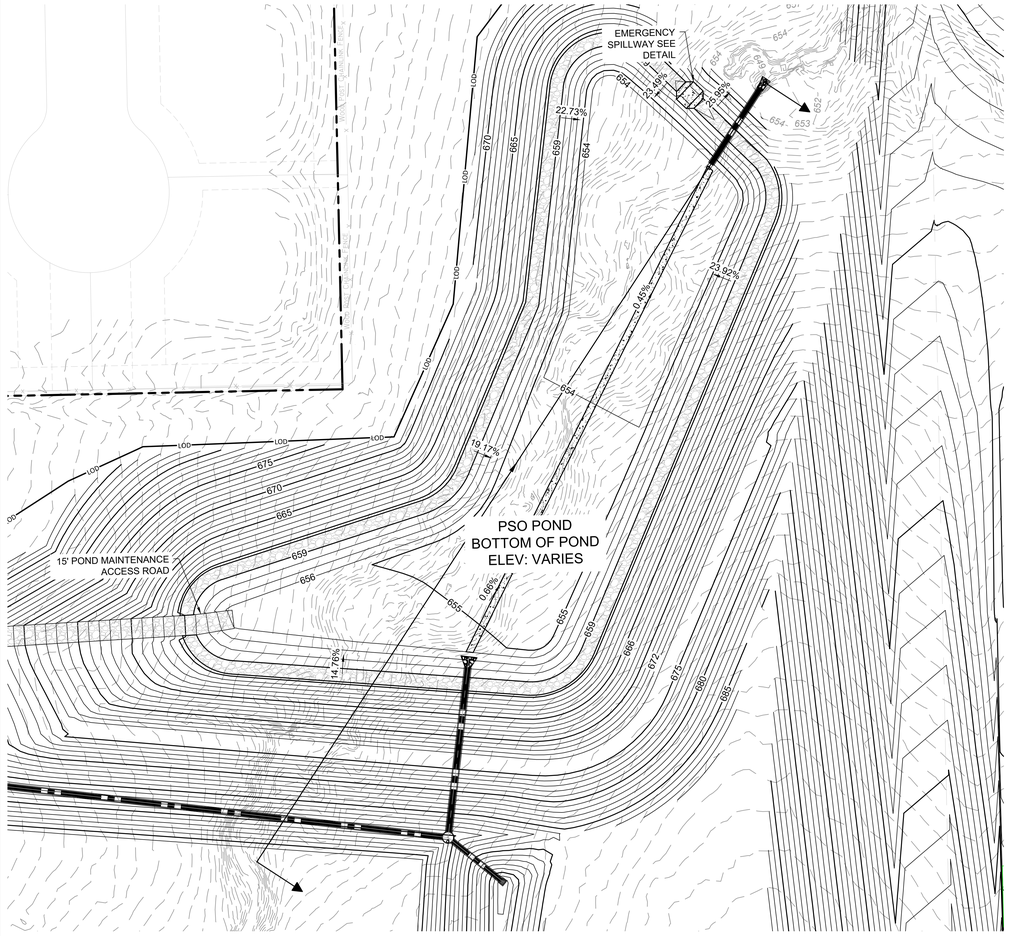
PROJ. NO.: 060007903

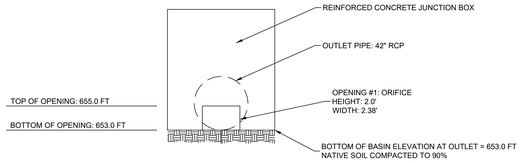
STORMWATER DETAILS

SCALE: AS SHOWN

SHEET NUMBER:
C-3501

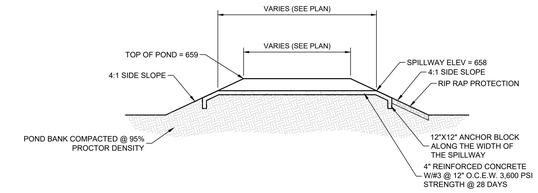
PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT





1 C3502 POND OUTLET STRUCTURE DETAIL #3
NTS

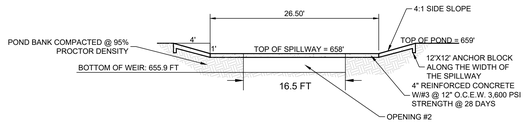
Composite Outfall Structure	
Opening #1	
Opening Type	Orifice
Flowline (ft)	653.00
Center Elevation (ft)	654.00
Height (ft)	2.00
Width (ft)	2.38
Area (sf)	4.75
Coefficient	0.60
Opening #2	
Opening Type	Weir
Elevation (ft)	655.90
Length (ft)	16.50
Coefficient	3.00



2 C3502 EMERGENCY SPILLWAY CROSS SECTION
NTS

P_DA_10 (PSO) Emergency Spillway	
Remaining $Q_{Undetained}$ (cfs)*	0.12
Rectangur Weir Coefficient, C_r	3
V-Notch Weir Coefficient, C_v	0.6
Length, L	10
Head Depth on Weir, H	1
Side Slope (H:V), S	4
Q_r (cfs)	30.00
Q_v (cfs)	10.27
$Q_{out} = Q_r + Q_v$ (cfs)	40.27
Bottom of Weir Elevation (ft)	658.00
Top Elevation (ft)	659

*$Q_{Undetained}$ flows are based on the peak inflow into the detention pond minus flow able to be conveyed by head on top of secondary weir outfall structure

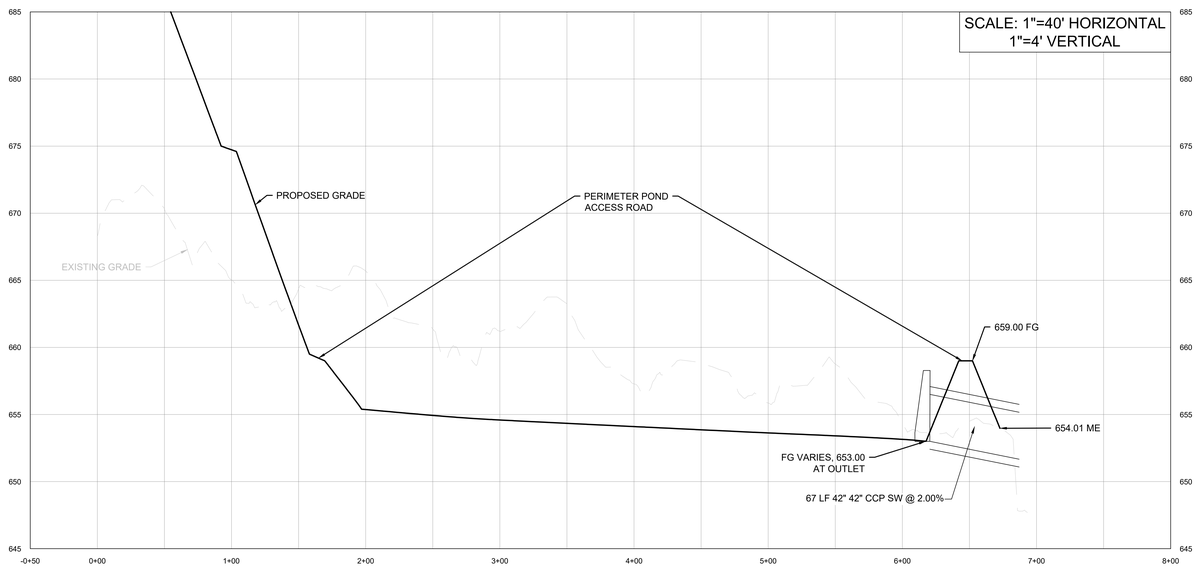


2 C3502 EMERGENCY SPILLWAY DETAIL
NTS

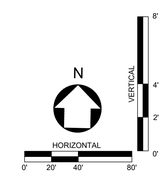
P_DA_10 (SUBS) Weir	
Rectangur Weir Coefficient, C_r	3
Length, L	16.50
Head Depth on Weir, H	3.10
Q_r (cfs)	270.18
Bottom of Weir Elevation (ft)	655.90
Top Elevation (ft)	659

P_DA_10 (PSO)			
Elevation (ft)	**Area (sf)**	**Area (ac)**	**Volume (ac-ft)**
653	0.00	0.00	0.00
654	21293.99	0.49	0.24
655	41596.12	0.95	0.97
656	54473.26	1.25	2.07
657	61687.88	1.42	3.40
658	69081.20	1.59	4.90
659	76642.04	1.76	6.58

HEC-HMS Pond Results					
Pond ID	**Storm Event**	**Volume (ac-ft)**	**Water Surface Elevation (ft)**	**Q_{in} (cfs)**	**Q_{out} (cfs)**
P_DA_10 (PSO)	002-YR	2.0	656.0	89.6	34.2
	005-YR	2.5	656.4	115.4	53.9
	010-YR	2.9	656.7	139.0	74.6
	050-YR	3.9	657.4	204.2	133.8
	100-YR	4.8	658.0	270.3	194.3



PSO POND SECTION A-A



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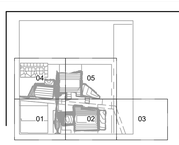
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1437 S Boulder Ave,
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Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

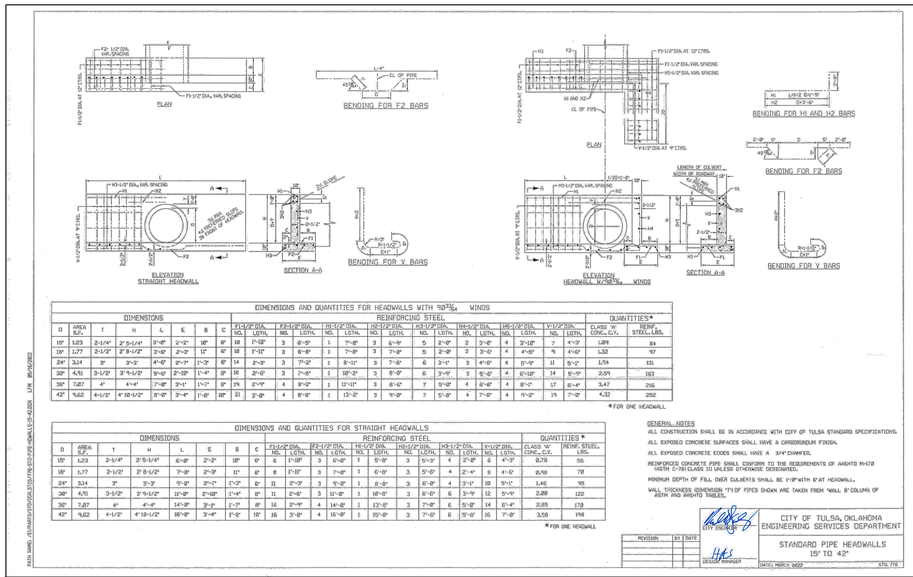
PROJ. NO.: 060057903

STORMWATER DETAILS

SCALE: AS SHOWN

SHEET NUMBER:
C-3502

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



DIMENSIONS AND QUANTITIES FOR HEADWALLS WITH 90° WINGS

DIMENSIONS								REINFORCING STEEL														QUANTITIES*	
								F1-1/2" DIA.		F2-1/2" DIA.		H1-1/2" DIA.		H2-1/2" DIA.		H3-1/2" DIA.		V-1/2" DIA.		CLASS 'A' CONC., C.Y.	REINF. STEEL, LBS.
D	AREA S.F.	T	H	L	E	B	C	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.		
15"	1.23	2'-1/4"	2'-5-1/4"	3'-4"	2'-2"	18"	9"	18	1'-08"	3	6'-5"	1	7'-6"	3	6'-9"	5	2'-8"	2	3'-6"	4	3'-10"	1.89	84
18"	1.77	2'-1/2"	2'-8-1/2"	3'-4"	2'-2"	12"	6"	18	1'-10"	3	7'-0"	1	7'-9"	3	7'-0"	5	2'-10"	2	3'-7"	4	4'-1"	1.32	97
24"	3.14	3"	3'-3"	4'-0"	2'-7"	1'-3"	6"	14	2'-0"	3	7'-2"	1	8'-11"	3	7'-8"	6	3'-1"	3	4'-0"	4	5'-4"	2.93	131
30"	4.91	3-1/2"	3'-9-1/2"	5'-0"	2'-10"	1'-4"	6"	16	2'-0"	3	7'-6"	1	9'-2"	3	8'-3"	6	3'-5"	3	5'-0"	4	6'-10"	4.14	163
36"	7.07	4"	4'-4"	7'-0"	3'-1"	1'-7"	9"	19	2'-5"	4	8'-2"	1	10'-11"	3	8'-6"	7	5'-0"	4	6'-8"	4	8'-1"	5.47	216
42"	9.62	4-1/2"	4'-10-1/2"	8'-8"	3'-4"	1'-9"	9"	23	2'-9"	4	8'-6"	1	12'-3"	3	9'-0"	7	5'-5"	4	7'-0"	4	9'-2"	7.9	282

* FOR ONE HEADWALL

DIMENSIONS AND QUANTITIES FOR STRAIGHT HEADWALLS

DIMENSIONS								REINFORCING STEEL														QUANTITIES *	
								F1-1/2" DIA.		F2-1/2" DIA.		H1-1/2" DIA.		H2-1/2" DIA.		H3-1/2" DIA.		V-1/2" DIA.		CLASS 'A' CONC., C.Y.	REINF. STEEL, LBS.
D	AREA S.F.	T	H	L	E	B	C	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.		
15"	1.23	2-1/4"	2'-5-1/4"	6'-4"	2'-2"	18"	9"	6	1'-10"	3	6'-4"	1	6'-9"	3	5'-3"	4	2'-8"	6	4'-3"	0.78	156
18"	1.77	2-1/2"	2'-8-1/2"	7'-0"	2'-2"	12"	6"	8	1'-11"	3	7'-0"	1	6'-6"	3	5'-5"	4	2'-4"	8	4'-6"	0.98	78
24"	3.14	3"	3'-3"	9'-0"	2'-7"	1'-3"	6"	11	2'-3"	3	9'-2"	1	8'-6"	3	6'-8"	4	3'-1"	10	5'-1"	1.46	95
30"	4.91	3-1/2"	3'-9-1/2"	10'-8"	2'-10"	1'-4"	6"	11	2'-6"	3	11'-6"	1	8'-9"	3	6'-10"	6	3'-5"	12	5'-9"	2.03	122
36"	7.07	4"	4'-4"	14'-0"	3'-1"	1'-7"	9"	16	2'-9"	4	14'-8"	1	13'-6"	3	7'-8"	6	5'-0"	14	6'-4"	2.65	178
42"	9.62	4-1/2"	4'-10-1/2"	18'-8"	3'-4"	1'-9"	9"	16	3'-8"	4	16'-8"	1	15'-3"	3	7'-11"	6	5'-5"	16	7'-8"	3.58	198

* FOR ONE HEADWALL

GENERAL NOTES

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF TULSA STANDARD SPECIFICATIONS.

ALL EXPOSED CONCRETE SURFACES SHALL HAVE A CARBORUNDUM FINISH.

ALL EXPOSED CONCRETE EDGES SHALL HAVE A 3/4" CHAMFER.

REINFORCED CONCRETE PIPE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-170 USING C-76 CLASS III UNLESS OTHERWISE DETERMINED.

MINIMUM DEPTH OF FILL OVER CULVERTS SHALL BE 1'-0" WITH 8" AT HEADWALL.

WALL THICKNESS DIMENSION "T" OF PIPES SHOWN ARE TAKEN FROM "WALL B" COLUMN OF ASTM AND AASHTO TABLES.

CITY OF TULSA, OKLAHOMA
CITY ENGINEER
ENGINEERING SERVICES DEPARTMENT

STANDARD PIPE HEADWALLS
15' TO 42'

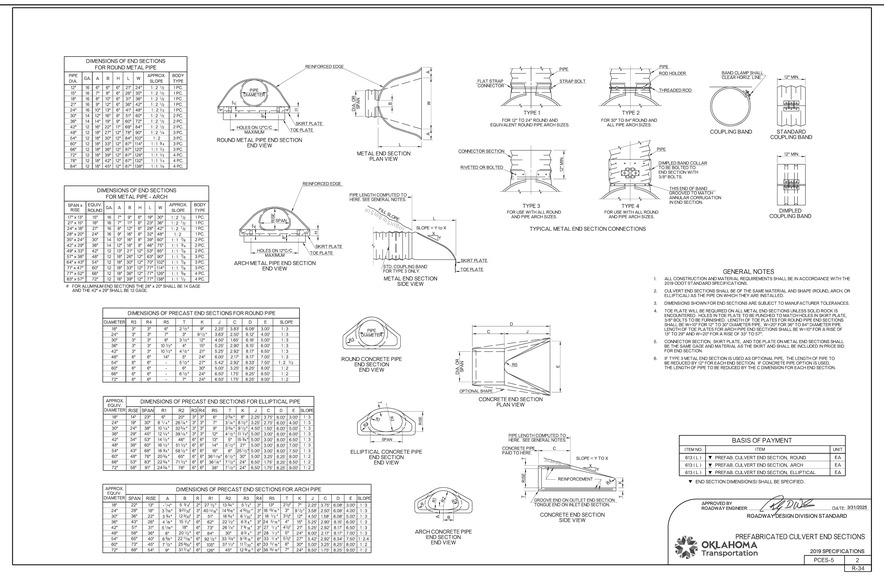
REVISION	BY	DATE

DESIGN MANAGER

DATE: MARCH, 2022

STD. 770

P:\EN_Work\...\STDPLATES\STD770_STD-PIPE-HDWLS-15-42.DGN LEM 08/16/2022



GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 2019 ODOT STANDARD SPECIFICATIONS.
2. CULVERT END SECTIONS SHALL BE OF THE SAME MATERIAL AND SHAPE (ROUND, ARCH, OR ELLIPTICAL) AS THE PIPE ON WHICH THEY ARE INSTALLED.
3. DIMENSIONS SHOWN FOR END SECTIONS ARE SUBJECT TO MANUFACTURER TOLERANCES.
4. TOE PLATE WILL BE REQUIRED ON ALL METAL END SECTIONS UNLESS SOLID ROCK IS ENCOUNTERED. HOLES IN TOE PLATE TO BE PUNCHED TO MATCH HOLES IN SKIRT PLATE. TOE PLATE SHALL BE FURNISHED WITH ALL METAL END SECTIONS. TOE PLATE SHALL BE W=10"FOR 12" TO 30" DIAMETER PIPE, W=20" FOR 36" TO 54" DIAMETER PIPE. LENGTH OF TOE PLATE FOR ARCH PIPE END SECTIONS SHALL BE W=10" FOR A RISE OF 29" OR LESS, AND W=20" FOR A RISE OF 36" OR MORE.
5. CONNECTOR BOLTS, SKIRT PLATE, AND TOE PLATE ON METAL END SECTIONS SHALL BE THE SAME SIZE AND MATERIAL AS THE SKIRT AND SHALL BE INCLUDED IN PRICE BID FOR END SECTION.
6. IF TYPE 5 METAL END SECTION IS USED AS OPTIONAL PIPE, THE LENGTH OF PIPE TO BE PAID FOR SHALL BE REDUCED BY THE LENGTH OF THE END SECTION. THE LENGTH OF PIPE TO BE REDUCED BY THE 'C' DIMENSION FOR EACH END SECTION.

BASIS OF PAYMENT

ITEM NO.	ITEM	UNIT
613 (1)	PREFAB. CULVERT END SECTION, ROUND	EA.
613 (2)	PREFAB. CULVERT END SECTION, ARCH	EA.
613 (3)	PREFAB. CULVERT END SECTION, ELLIPTICAL	EA.

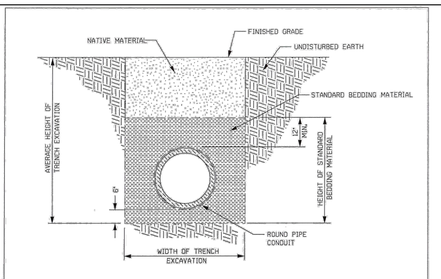
▼ END SECTION DIMENSIONS SHALL BE SPECIFIED.

APPROVED BY ROADWAY ENGINEER: DATE: 3/31/2020
ROADWAY DESIGN DIVISION STANDARD

OKLAHOMA Transportation

PREFABRICATED CULVERT END SECTIONS
2019 SPECIFICATIONS
PCES-5 | 2 | R-34

P:\EN_Work\...\STDPLATES\STD770_STD-PIPE-HDWLS-15-42.DGN LEM 08/16/2022



LIMITS OF STANDARD BEDDING MATERIAL QUANTITIES FOR BEDDING MATERIAL DO NOT INCLUDE THE SPACE WITHIN AND BOUNDED BY THE OUTER SURFACE OF THE PIPE CONDUIT.

NOTE:
THIS BEDDING DETAIL SHALL BE USED FOR ALL STORM SEWER PIPE REGARLESS OF PIPE MATERIAL. STANDARD BEDDING MATERIAL SHALL BE ODOT TYPE "A" AGGREGATE BASE OR QUICK SET FLOWABLE FILL AT THE DIRECTION OF THE ENGINEER. BEDDING AROUND PIPE ZONE SHOULD BE PER PIPE TYPE. TYPE "A" AGGREGATE BASE MUST BE TO THE TOP OF THE TRENCH UNDER PAVEMENT. TYPE "A" AGGREGATE BASE TO BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.

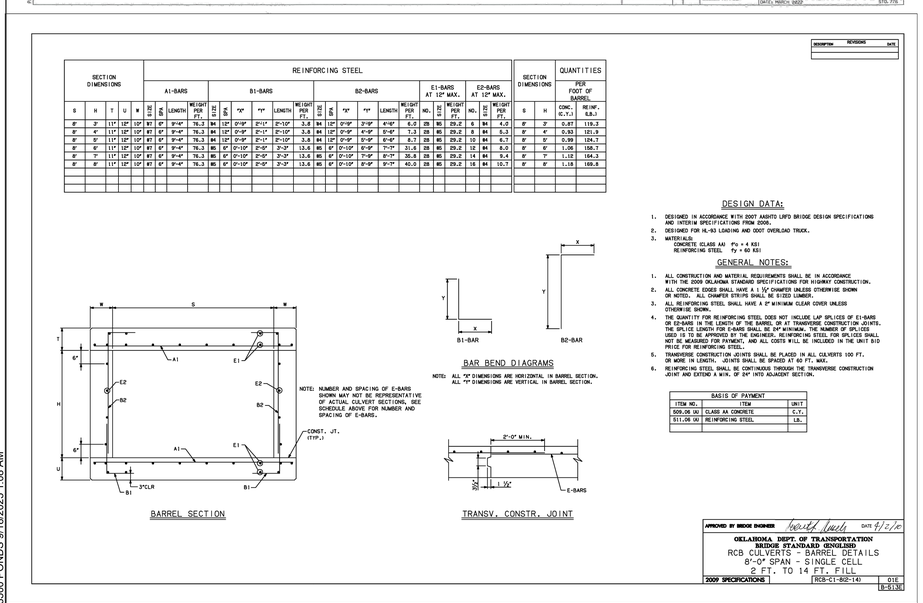
PIPE SIZE, IN.	TRENCH WIDTH, FT.
ID < 24"	OD + 2'
24" > ID < 36"	OD + 2.5'
36" > ID < 60"	OD + 3.5'
ID = > 60"	OD + 2' EACH SIDE OF PIPE

STANDARD PIPE BEDDING DETAIL FOR STORM SEWER

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

DRAWN BY: RJKO.
CHECKED BY: HH
DATE: MARCH 2022
APPROVED:
NOT TO SCALE | STANDARD NO. 780

P:\EN_Work\...\STDPLATES\STD780_STD-PIPE-BEDDING-CLASS-PIPE.DGN BMD 12/28/2022



DESIGN DATA:

1. DESIGNED IN ACCORDANCE WITH ODOT AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND INTERIM SPECIFICATIONS FROM ODOT.
2. DESIGNED FOR HL-93 LOADING AND ODOT OVERLOAD TRUCK.
3. MATERIALS:
   CONCRETE (CLASS AA) $F'c = 4$ KSI
   REINFORCING STEEL $Fy = 60$ KSI

GENERAL NOTES:

1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
2. ALL CONCRETE EDGES SHALL HAVE A 1 ½" CHAMFER UNLESS OTHERWISE SHOWN ON NOTED. ALL CHAMFER STRIPS SHALL BE BEVEL LUMBER.
3. ALL REINFORCING STEEL SHALL HAVE A 2" MINIMUM CLEAR COVER UNLESS OTHERWISE SHOWN.
4. THE QUANTITY FOR REINFORCING STEEL DOES NOT INCLUDE LAP SPLICES OF E1-BARS OR E2-BARS IN THE LENGTH OF THE BARREL OR AT TRANSVERSE CONSTRUCTION JOINTS. THE SPLICE LENGTH FOR E-BARS SHALL BE 24" MINIMUM. THE NUMBER OF SPLICES USED IS TO BE APPROVED BY THE ENGINEER. REINFORCING STEEL FOR SPLICES SHALL NOT BE MEASURED FOR PAYMENT, AND ALL COSTS WILL BE INCLUDED IN THE UNIT BID PRICE FOR REINFORCING STEEL.
5. TRANSVERSE CONSTRUCTION JOINTS SHALL BE PLACED IN ALL CULVERTS 100 FT. OR MORE IN LENGTH. JOINTS SHALL BE SPACED AT 60 FT. MAX.
6. REINFORCING STEEL SHALL BE CONTINUOUS THROUGH THE TRANSVERSE CONSTRUCTION JOINT AND EXTEND A MIN. OF 24" INTO ADJACENT SECTION.

BASIS OF PAYMENT

ITEM NO.	ITEM	UNIT
506.06 (A)	CLASS AA CONCRETE	C.Y.
511.06 (A)	REINFORCING STEEL	LB.

APPROVED BY BRIDGE ENGINEER: DATE: 4/2/20

OKLAHOMA DEPT. OF TRANSPORTATION
BRIDGE STANDARD (ENGLISH)
RCB CULVERTS - BARREL DETAILS
8'-0" SPAN - SINGLE CELL
2 FT. TO 14 FT. FILL

2009 SPECIFICATIONS | RCB-C1-802-14I | 01E | R-5136

DESCRIPTION	REVISIONS	DATE

SECTION DIMENSIONS		REINFORCING STEEL																																		SECTION DIMENSIONS		QUANTITIES PER FOOT OF BARREL
		A1-BARS						B1-BARS								B2-BARS									E1-BARS AT 12" MAX.			E2-BARS AT 12" MAX.											
S	H	T	U	W	NO.	SIZE	LENGTH	WEIGHT PER FT.	NO.	SIZE	"A"	"B"	LENGTH	WEIGHT PER FT.	NO.	SIZE	"A"	"B"	"C"	LENGTH	WEIGHT PER FT.	NO.	SIZE	"A"	"B"	"C"	LENGTH	WEIGHT PER FT.	NO.	SIZE	"A"	"B"	"C"	LENGTH	WEIGHT PER FT.	NO.	SIZE	WEIGHT PER FT.	S	H	CONC. C.Y.	REINF. LBS.
8'	2'	1'1"	12"	10"	87	6	9'-4"	76.3	84	12"	0'-9"	2'-1"	2'-10"	3.8	84	12"	0'-9"	2'-10"	3'-9"	4'-6"	6.2	25	#5	29.2	6	#4	4.0	8'	2'	0.87	119.2
8'	4'	1'1"	12"	10"	87	6	9'-4"	76.3	84	12"	0'-9"	2'-1"	2'-10"	3.8	84	12"	0'-9"	2'-10"	4'-6"	5'-4"	7.3	25	#5	29.2	8	#4	5.3	8'	4'	0.93	121.9
8'	5'	1'1"	12"	10"	87	6	9'-4"	76.3	84	12"	0'-9"	2'-1"	2'-10"	3.8	84	12"	0'-9"	2'-10"	5'-3"	6'-1"	8.3	25	#5	29.2	10	#4	6.7	8'	5'	0.99	124.7
8'	6'	1'1"	12"	10"	87	6	9'-4"	76.3	85	6"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	12	#4	8.0	8'	6'	1.06	158.7
8'	7'	1'1"	12"	10"	87	6	9'-4"	76.3	85	6"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	14	#4	9.4	8'	7'	1.12	164.3
8'	8'	1'1"	12"	10"	87	6	9'-4"	76.3	85	6"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	85	9"	0'-10"	2'-6"	2'-3"	13.5	16	#4	10.7	8'	8'	1.18	169.8

NOTE: NUMBER AND SPACING OF E-BARS SHOWN MAY NOT BE REPRESENTATIVE OF ACTUAL CULVERT SECTIONS, SEE SCHEDULE ABOVE FOR NUMBER AND SPACING OF E-BARS.

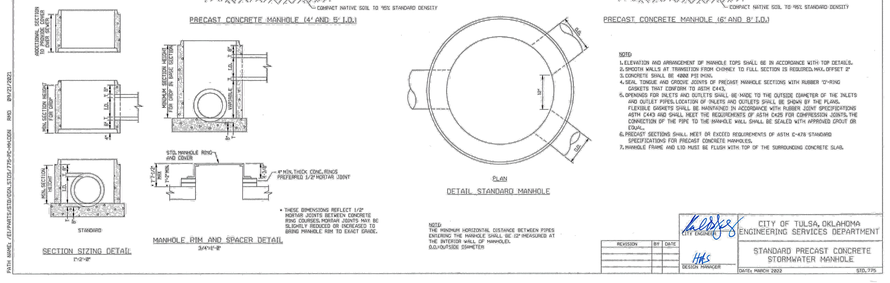
NOTE: ALL "S" DIMENSIONS ARE HORIZONTAL IN BARREL SECTION. ALL "Y" DIMENSIONS ARE VERTICAL IN BARREL SECTION.

APPROVED BY BRIDGE ENGINEER: DATE: 4/2/20

OKLAHOMA DEPT. OF TRANSPORTATION
BRIDGE STANDARD (ENGLISH)
RCB CULVERTS - BARREL DETAILS
8'-0" SPAN - SINGLE CELL
0' FT. TO 2 FT. FILL

2009 SPECIFICATIONS | RCB-C1-802-14I | 01E | R-5136

P:\EN_Work\...\STDPLATES\STD770_STD-PIPE-HDWLS-15-42.DGN LEM 08/16/2022



REVISION	BY	DATE

DESIGN MANAGER

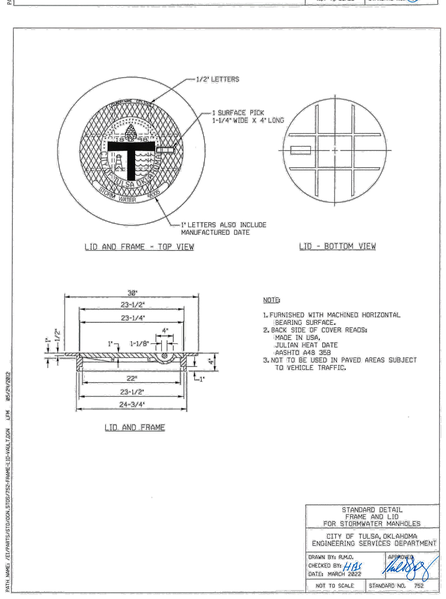
CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

STANDARD PRECAST CONCRETE STORMWATER MANHOLE

DATE: MARCH 2022

STD.775

P:\EN_Work\...\STDPLATES\STD775_STD-PRECAST-MANHOLE.DGN LEM 08/29/2022



NOTE
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.
2. BACK SIDE OF COVER READS 'MADE IN USA, JULIAN HEAT DATE AASHTO A48 35B
3. NOT TO BE USED IN PAVED AREAS SUBJECT TO VEHICLE TRAFFIC.

STANDARD DETAIL FRAME AND LID FOR STORMWATER MANHOLES

CITY OF TULSA, OKLAHOMA
ENGINEERING SERVICES DEPARTMENT

DRAWN BY: RJKO.
CHECKED BY: HH
DATE: MARCH 2022
APPROVED:
NOT TO SCALE | STANDARD NO. 752

P:\EN_Work\...\STDPLATES\STD752_STD-FRAME-COVER.DGN LEM 08/29/2022

WINGWALL DIMENSIONS			
SPAN	W	Q	F
4'	8'	8'0"	1'0"
5'	7'	7'6"	1'
6'	7'	7'0"	1'
8'	10'	11'6"	2'0"
10'	10'	11'6"	2'0"
12'	11'	12'0"	2'

WINGWALL BAR LIST (ONE WINGWALL SHOWN, TWO REQUIRED)					
MARK	SIZE	QTY./FORM	LENGTH		REMARKS
WD1	#7	5	STR	5'-4"	
WH1	#4	2	STR	8'-0"	
WH2	#5	10	STR	10'-0" AVG.	3'-4" TO 17'-8"
WL1	#5	2	STR	20'-2"	
WL2	#5	13	BNT	6'-11"	
WL3	#5	11	BNT	4'-9" AVG.	3'-0" TO 5'-10"
WT1	#4	11	STR	8'-10"	
WT2	#4	2	STR	5'-0"	
WT3	#4	9	STR	4'-85" AVG.	3'-1" TO 5'-10"
WT4	#4	9	STR	5'-3" AVG.	1'-0" TO 3'-10"
WV1	#5	2	STR	6'-0"	
WV2	#5	9	STR	4'-85" AVG.	3'-1" TO 5'-10"
U1	#4	1	BNT	8'-2"	

① 4-SETS OF 9-ALE BARS REQUIRED
② 2-SETS OF 6-WH2 BARS REQUIRED

APRON VARIABLES			
SPAN	DIM. R	DIM. Q	QTY. N
4'	5'-4"	12'-0"	18	6
5'	6'-0"	13'-3"	18	7
6'	7'-0"	13'-9"	18	8
8'	9'-6"	14'-9"	18	10
10'	11'-8"	15'-9"	18	14
12'	13'-10"	16'-9"	18	16

APRON AND HEADWALL BAR LIST (ONE APRON AND ONE HEADWALL SHOWN)																							
			4' SPAN			5' SPAN			6' SPAN			8' SPAN			10' SPAN			12' SPAN		
MARK	SIZE	FORM	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS	QTY.	LENGTH	REMARKS
AC	#4	BNT	4	3'-6"		4	3'-6"		4	3'-6"		4	3'-6"		4	3'-6"		4	3'-6"	
AD1	#4	STR	4	22'-2"		4	22'-2"		4	22'-2"		4	22'-2"		4	22'-2"		4	22'-2"	
AL1	#4	STR	12	20'-0"		14	20'-0"		16	20'-0"		20	20'-0"		28	20'-0"		36	20'-0"	
① ALE	#4	STR	36	9'-5" AVG.	2'-6" TO 16'-4"	36	9'-5" AVG.	2'-6" TO 16'-4"	36	9'-5" AVG.	2'-6" TO 16'-4"	36	9'-5" AVG.	2'-6" TO 16'-4"	36	9'-5" AVG.	2'-6" TO 16'-4"	36	9'-5" AVG.	2'-6" TO 16'-4"
AT1	#4	STR	4	25'-2"		4	27'-2"		4	29'-2"		4	33'-2"		4	33'-2"		5	33'-2"	
AT2	#4	STR	18	14'-10" AVG.	5'-0" TO 24'-8"	18	15'-10" AVG.	6'-0" TO 25'-8"	18	16'-10" AVG.	7'-0" TO 26'-8"	18	18'-10" AVG.	9'-0" TO 28'-8"	18	20'-10" AVG.	11'-0" TO 30'-8"	18	22'-10" AVG.	13'-0" TO 32'-8"
AT3	#5	STR	18	14'-10" AVG.	5'-0" TO 24'-8"	18	15'-10" AVG.	6'-0" TO 25'-8"	18	16'-10" AVG.	7'-0" TO 26'-8"	18	18'-10" AVG.	9'-0" TO 28'-8"	18	20'-10" AVG.	11'-0" TO 30'-8"	18	22'-10" AVG.	13'-0" TO 32'-8"
CH	#4	STR	4	5'-0"		4	5'-10"		4	6'-10"		4	9'-4"		4	11'-4"		4	13'-6"	
CL1	#4	BNT	6	4'-4"		7	4'-4"		8	4'-4"		10	4'-4"		14	4'-4"		16	4'-4"	
CL2	#4	BNT	6	4'-3"		7	4'-3"		8	4'-3"		10	4'-3"		14	4'-3"		16	4'-3"	

QUANTITIES						
ITEM	UNIT	4' SPAN	5' SPAN	6' SPAN	8' SPAN	10' SPAN	12' SPAN
CLASS AA CONCRETE	CY	13.00	13.60	14.20	15.50	16.70	17.90
REINFORCING STEEL	LB	2060.00	2130.00	2170.00	2330.00	2530.00	2670.00

NOTE: QUANTITIES ABOVE ARE FOR ONE END SECTION, WHICH IS COMPRISED OF ONE HEADWALL, ONE APRON, AND TWO WINGWALLS. INCLUDED IN REINFORCING STEEL PAY ITEM QUANTITY IS THE WEIGHT OF ADDITIONAL RCB BARREL REINFORCING STEEL REQUIRED AS SHOWN.

APPROVED BY BRIDGE ENGINEER: DATE: 4/2/20

OKLAHOMA DEPT. OF TRANSPORTATION
BRIDGE STANDARD (ENGLISH)
RCB CULVERTS - END SECTION DETAILS
SINGLE CELL - 4'-0" HEIGHT - 0°
SHEET NO. 1 OF 1

2009 SPECIFICATIONS | RCB-E1-144-0-1 | 01E | R-5142

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SETTLEMENT MONUMENT DETAIL

NTS

Terracon

9522 East 47th Place, Unit D
Tulsa, Oklahoma 74145
P (918) 250-0461
Terracon.com

September 16, 2025

Kimley-Horn & Associates, Inc.
1437 S Boulder Avenue
Tulsa, Oklahoma 74119

Attn: Randall, Devin
P: (918) 440-1553
E: Devin.Randall@Kimley-Horn.com

Re: Supplemental Geotechnical Services
Settlement Monitoring Program for DC1A
Project Clydesdale
E 76th Street
Owasso, Oklahoma
Terracon Project No. 04255087

Dear Mr. Randall:

We appreciate the opportunity to provide supplemental geotechnical services for the above referenced project. The purpose of this memorandum is to provide a settlement monitoring program for settlement associated with mass grading for phase 1 of the project to be located in Owasso, Oklahoma.

Following review of "20250915 – SETTLEMENT EXHIBIT" provided by Kimley Horn, dated September 15, 2024, it is our understanding that fills over 12 feet thick are planned to be placed across the majority of the eastern half of the building pad as well as in a relatively minor area of the phase 1 HUB building parking lot. The weight of the new fill will cause some consolidation of underlying soils, particularly in locations where fill thicknesses exceed 12 feet. To reduce post-construction settlements in fill areas, we recommend monitoring the settlements and allowing time in the construction schedule for settlement from the weight of the new fill to occur before proceeding with construction of foundations, slabs, pavements, and other settlement sensitive elements.

The magnitude of settlement and time required for settlements to occur under the weight of the fill are expected to vary depending upon the subsurface conditions and the amount of fill. Based on the fill thicknesses shown on the original mass grading plan provided by Kimley-Horn and conversations with the client, the construction schedule should allow for a period of approximately 15 to 30 days of monitoring settlements following completion of fill placement. In fill areas exceeding 12 feet, we recommend installing settlement monitoring monuments (as shown in Attachments A and B) following completion of fill placement.

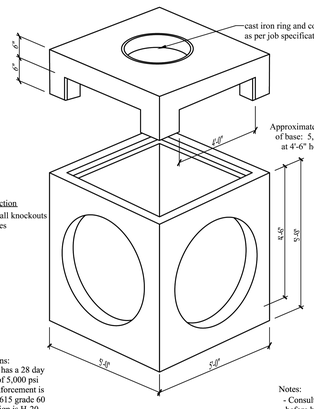
Supplemental Geotechnical Services | Settlement Monitoring Program
Project Clydesdale Design Level Geotech | Owasso, Oklahoma
September 16, 2025 | Terracon Project No. 04255087

Terracon

The contractor should install and maintain the settlement monuments throughout the monitoring program. The contractor should also retain the project surveyor to collect the readings from the settlement monuments. The readings should be provided to Terracon for review to determine the extent of the settlement.

Settlement monuments installed throughout the deeper fill areas of the building pad could be used to monitor vertical movement. Settlement monuments would consist of No. 8 steel reinforcing

4' x 4' x var 4-Way Inlet



Bottom Section
48" dia thinwall knockouts
all four sides

Specifications:
- Concrete has a 28 day strength of 5,000 psi
- Steel reinforcement is ASTM A615 grade 60
- Load design is H-20

Notes:
- Consult manufacturer before handling

Capital Precast	CAPITAL PRECAST, INC. 6905 SOUTH OLD BASTROP HWY SAN MARCOS, TEXAS 78666 PH. (830) 606-6200	FOR	4' x 4' x var 4-Way Inlet	
		JOB		
		DRAWN: RW	DATE: 12/1/2015	Rev. No.
		FILE: catalog/areainlets/4x4 area inlet		SHEET: 1 of 1

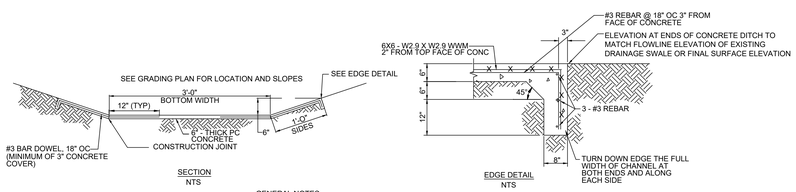
6' x 6' x var 4-Way Inlet

Bottom Section
72" dia thinwall knockouts
all four sides

Specifications:
- Concrete has a 28 day strength of 5,000 psi
- Steel reinforcement is ASTM A615 grade 60
- Load design is H-20

Notes:
- Consult manufacturer before handling

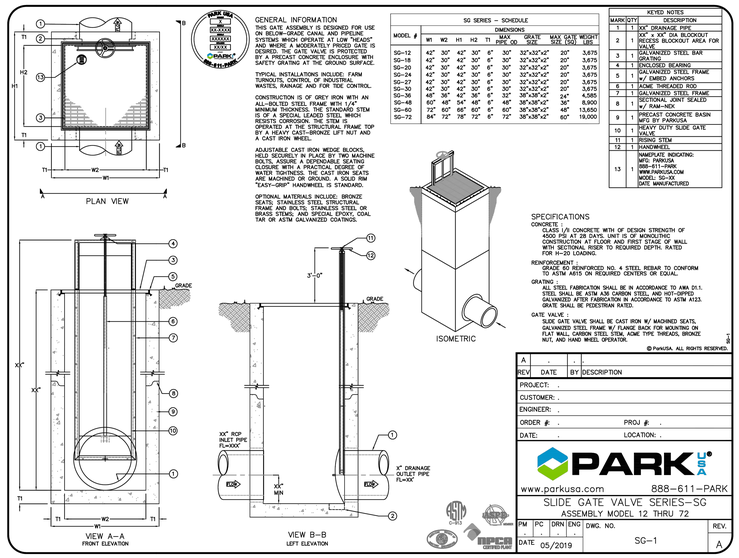
Capital Precast	CAPITAL PRECAST, INC. 6905 SOUTH OLD BASTROP HWY SAN MARCOS, TEXAS 78666 PH. (830) 606-6200	FOR	6' x 6' x var 4-Way Inlet	
		JOB		
		DRAWN: RW	DATE: 12/1/2015	Rev. No.
		FILE: catalog/areainlets/6x6 area inlet		SHEET: 1 of 1



GENERAL NOTES:

1. ALL REINFORCEMENT BARS TO BE GRADE 60 YIELD STRENGTH.
2. CONTROL JOINTS TO BE 15' OC TRANSVERSE TO CHANNEL CENTERLINE AXIS. FILL JOINTS WITH SEALANT.

11 / C501V — CONCRETE SWALE DETAIL — NTS



GENERAL INFORMATION

THIS GATE ASSEMBLY IS DESIGNED FOR USE ON BELOW-GRADE CANAL AND PIPELINE SYSTEMS WHICH OPERATE AT LOW "HEADS", AND WHERE A MODERATELY PRICED GATE IS DESIRED. THE GATE IS NORMALLY OPERATED BY A PRECAST-CONCRETE ENCLOSURE WITH SAFETY GRATING AT THE GROUND SURFACE.

TYPICAL INSTALLATIONS INCLUDE: FARM TURNOUTS, CONTROL OF INDUSTRIAL WASTES, RAINAGE AND FOR TIDE CONTROL.

CONSTRUCTION IS OF GREY IRON WITH AN ALL-BOLTED STEEL FRAME WITH 1/4" MINIMUM THICKNESS. THE STANDARD STEM IS OF A SPECIAL LEADED STEEL WHICH PROVIDES STRENGTH AND IS EASILY OPERATED AT THE STRUCTURAL FRAME TOP BY A HEAVY CAST-BRONZE LIFT NUT AND A CAST IRON WHEEL.

ADJUSTABLE CAST IRON WEDGE BLOCKS, HELD SECURELY IN PLACE BY TWO MACHINE BOLTS, ASSURE A DEPENDABLE SEATING CLOSURE WITH A PRACTICAL DEGREE OF WATER TIGHTNESS. THE CAST IRON SEATS ARE MACHINED OR GROUND. A SOLID RIM "EASY-GRIP" HANDWHEEL IS STANDARD.

OPTIONAL MATERIALS INCLUDE: BRONZE SEATS, STAINLESS STEEL STRUCTURAL FRAME AND BOLTS, STAINLESS STEEL OR BRASS STEMS, AND SPECIAL EPOXY, COAL TAR OR ASTM GALVANIZED COATINGS.

SG SERIES – SCHEDULE

MODEL #	DIMENSIONS W1	W2	H1	H2	T1	MAX PIPE OD	GRATE SIZE	MAX GATE SIZE	WEIGHT LBS
SG–12	42"	30"	42"	30"	6"	30"	32"x32"x2"	20"	3,675
SG–18	42"	30"	42"	30"	6"	30"	32"x32"x2"	20"	3,675
SG–20	42"	30"	42"	30"	6"	30"	32"x32"x2"	20"	3,675
SG–24	42"	30"	42"	30"	6"	30"	32"x32"x2"	20"	3,675
SG–27	42"	30"	42"	30"	6"	30"	32"x32"x2"	20"	3,675
SG–30	42"	30"	42"	30"	6"	30"	32"x32"x2"	20"	3,675
SG–36	48"	36"	42"	36"	6"	32"	38"x38"x2"	24"	4,565
SG–48	60"	48"	54"	48"	6"	48"	38"x38"x2"	36"	8,900
SG–60	72"	60"	66"	60"	6"	60"	38"x38"x2"	48"	13,650
SG–72	84"	72"	78"	72"	6"	72"	38"x38"x2"	60"	19,000

KEYED NOTES

MARK	QTY	DESCRIPTION
1	1	XX" DRAINAGE PIPE
2	1	XX" x XX" DIA BLOCKOUT RECESS BLOCKOUT AREA FOR VALVE
3	1	GALVANIZED STEEL BAR GRATE
4	1	ENCLOSED BEARING
5	1	GALVANIZED STEEL FRAME w/ EMBED ANCHORS
6	1	ACME THREADED ROD
7	1	GALVANIZED STEEL FRAME
8	1	OPTIONAL JOINT SEALED w/ RAM–NEK
9	1	PRECAST CONCRETE BASIN MFG. BY PARKUSA
10	1	HEAVY DUTY SLIDE GATE VALVE
11	1	RISING STEM
12	1	HANDWHEEL
13	1	NAMEPLATE INDICATING: MFG: PARKUSA 888–611–PARK WWW.PARKUSA.COM MODEL: SG–XX DATE MANUFACTURED

SPECIFICATIONS

CONCRETE :
CLASS 'A' CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL. CONTRACTOR TO FINAL RISER TO REQUIRED DEPTH. RATED FOR H-20 LOADING.

REINFORCEMENT :
GRADE 60 REINFORCED NO. 4 STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.

GRATING :
ALL STEEL FABRICATION SHALL BE IN ACCORDANCE TO AWA D1.1. STEEL SHALL BE ASTM A36 CARBON STEEL, AND HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE TO ASTM A123. GRATE SHALL BE PEDESTRIAN RATED.

GATE VALVE :
SLIDE GATE VALVE SHALL BE CAST IRON W/ MACHINED SEATS, GALVANIZED STEEL FRAME W/ FLANGE BACK FOR MOUNTING ON FLAT WALL, CARBON STEEL STEM, ACME TYPE THREADS, BRONZE NUT, AND HAND WHEEL OPERATOR.

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REV	DATE	BY	DESCRIPTION
A	.	.	.

PROJECT: .
CUSTOMER: .
ENGINEER: .
ORDER #: . PROJ #: .
DATE: . LOCATION: .

PARK USA — www.parkusa.com 888–611–PARK

SLIDE GATE VALVE SERIES–SG
ASSEMBLY MODEL 12 THRU 72

PM	PC	DRN	ENG	DWG. NO.	REV.
.	.	.	.	SG–1	A

DATE 05/2019

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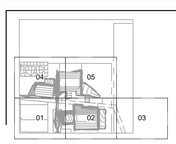
OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave,
Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING
(NOT FOR CONSTRUCTION)
2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:
APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

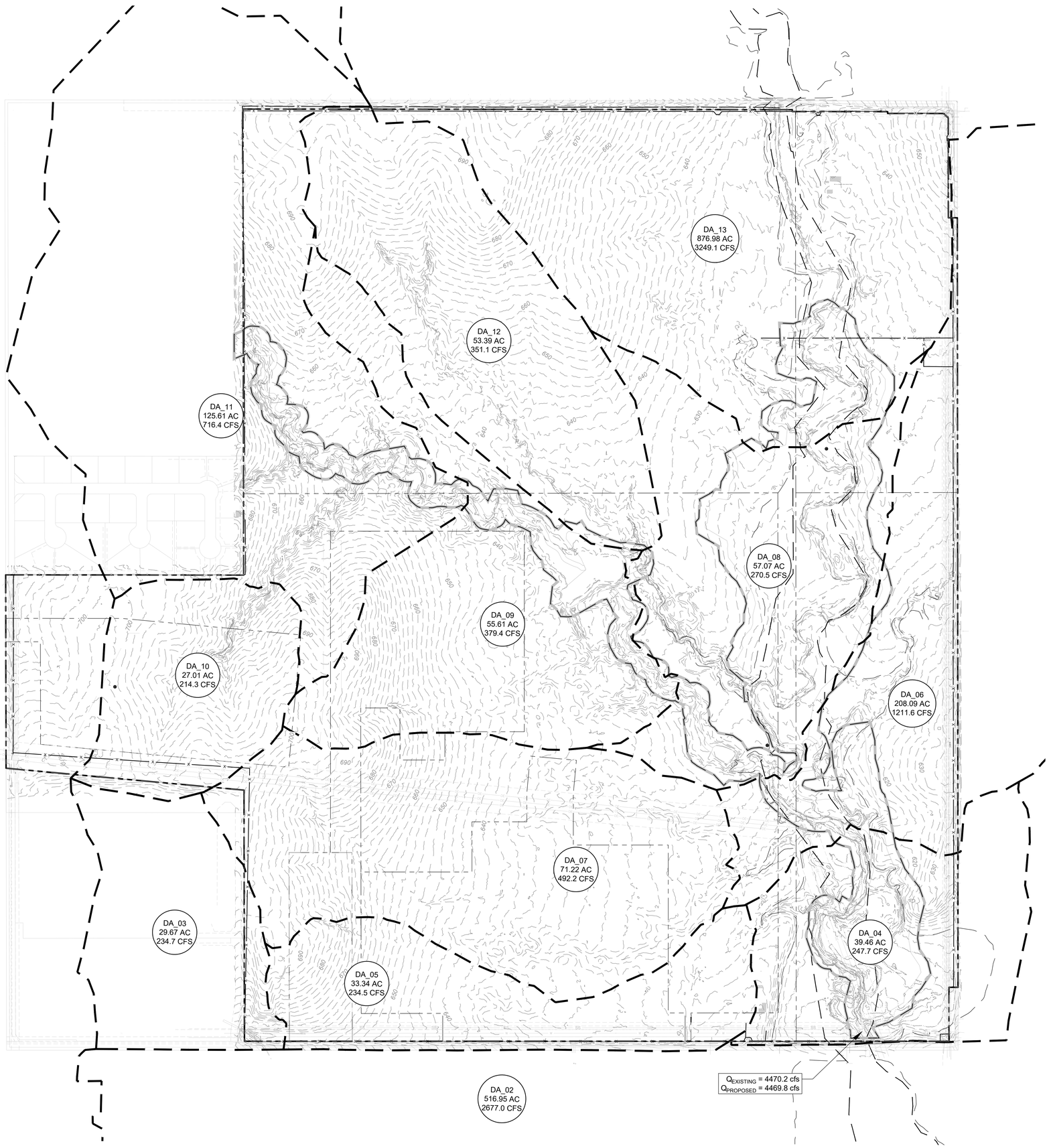
PROJ. NO.: 060007903

STORMWATER DETAILS

SCALE: AS SHOWN

SHEET NUMBER:
C-3504

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



Pre-Project Drainage Area Parameters

DA	Area (ac)	Area (mi^2)	CN	TC (min)	TC_{lag} (min)	Q_{L100} (cfs)
DA_01	129.31	0.2020	82.33	26.1	15.7	835.7
DA_02	516.95	0.8077	83.23	41.1	24.7	2677
DA_03	29.67	0.0464	93.35	21.2	12.7	234.7
DA_04	39.46	0.0617	70.33	18.6	11.2	247.7
DA_05	33.34	0.0521	79.17	20.2	12.1	234.5
DA_06	208.09	0.3251	83.03	33.9	20.3	1211.6
DA_07	71.22	0.1113	77.96	20.2	12.1	492.2
DA_08	57.07	0.0892	71.61	34.6	20.7	270.5
DA_09	55.61	0.0869	78.38	20.9	12.5	379.4
DA_10	27.01	0.0422	79.42	15.6	9.4	214.3
DA_11	125.61	0.1963	80.86	32.8	19.7	716.4
DA_12	53.39	0.0834	78.41	22.7	13.6	351.1
DA_13	876.98	1.3703	81.26	71.1	42.7	3249.1

Pre-Project Reach Routing Calculations

Reach	Methodology	Length	Slope (ft/ft)	Index Flow (cfs)	Manning's	Subreaches	Bottom Width (ft)	Side Slope (ft:ft)	Style
R_DA_02	Modified Puls	-	-	-	-	-	-	-	-
R_DA_03	Kinetic Wave	6955	0.010	200	0.045	2	292	20.0	Trapezoidal
R_DA_04	Modified Puls	-	-	-	-	-	-	-	-
R_DA_05	Kinetic Wave	1389	0.013	200	0.045	2	23	2.3	Trapezoidal
R_DA_06	Modified Puls	-	-	-	-	-	-	-	-
R_DA_07	Kinetic Wave	803	0.016	500	0.0450	2	7	2.9	Trapezoidal
R_DA_08	Modified Puls	-	-	-	-	-	-	-	-
R_DA_09	Kinetic Wave	980	0.007	1200	0.0450	2	7	6.3	Trapezoidal
R_DA_10	Kinetic Wave	2257	0.013	200	0.0450	2	5	4.3	Trapezoidal
R_DA_11	Kinetic Wave	2071	0.008	900	0.0450	2	51	2.4	Trapezoidal
R_DA_12	Kinetic Wave	2049	0.006	400	0.0450	2	7	3.6	Trapezoidal
R_DA_13	Modified Puls	-	-	-	-	-	-	-	-

TIME OF CONCENTRATION & LAG TIME
Pre-Project Conditions
TR-55 Methodology

	SHEET FLOW: Tc = (0.007(nL)^0.8)/(P2^0.5)/s^0.4); 2-year/24-hr Rainfall Depth (in) from NOAA Atlas 14 = 3.86						SHALLOW CONCENTRATED FLOW: Tc = L / 60*V						ENCLOSED SYSTEM PIPE: Tc = L / 60*V; Velocities assumed to be 7 ft/s.					OPEN CHANNEL FLOW: Tc = L / 60*V; Velocities assumed to be 5 ft/s.			TOTAL	
Basin	Length (ft)	$Elev_U$	$Elev_D$	Slope (ft/ft)	Manning's "n"	T_{C1} (min)	Length (ft)	$Elev_U$	$Elev_D$	Slope (ft/ft)	Condition NRCS Fig. 3	V_{avg} (ft/s)	T_{C2} (min)	Pipe Description	Length (ft)	Slope (ft/ft)	Velocity (ft/s)	T_{C3} (min)	ΣT_{C3} (min)	Length (ft)	Velocity (ft/s)	T_{C4} (min)	$T_{C TOTAL}$ (min)	$T_{C AD}$ (min)
DA_01	150	621.70	618.30	0.023	0.15	11.7	492	618.30	604.10	0.029	Unpaved	2.74	3.0			None				3408	5	11.4	26.1	15.7
DA_02	150	650.40	646.80	0.024	0.15	11.5	1386	646.80	622.70	0.017	Unpaved	2.13	10.9			None				5644	5	18.8	41.1	24.7
DA_03	150	707.20	704.60	0.017	0.15	13.1	899	704.60	677.60	0.030	Unpaved	2.80	5.4			None				834	5	2.8	21.2	12.7
DA_04	150	637.50	630.30	0.048	0.15	8.7	887	630.30	611.40	0.021	Unpaved	2.36	6.3			None				1097	5	3.7	18.6	11.2
DA_05	150	694.50	688.20	0.042	0.15	9.2	562	688.20	648.90	0.068	Unpaved	4.19	2.3			None				2604	5	8.7	20.2	12.1
DA_06	150	687.80	683.90	0.026	0.15	11.1	55	683.90	682.50	0.025	Unpaved	2.57	0.4			None				6730	5	22.4	33.9	20.3
DA_07	150	694.50	688.20	0.042	0.15	9.2	562	688.20	648.90	0.068	Unpaved	4.19	2.3			None				2604	5	8.7	20.2	12.1
DA_08	150	634.30	633.30	0.007	0.15	19.1	663	633.30	614.50	0.028	Unpaved	2.72	4.1			None				3406	5	11.4	34.6	20.7
DA_09	150	688.40	679.50	0.059	0.15	8.0	957	679.50	642.40	0.039	Unpaved	3.18	5.0			None				2355	5	7.9	20.9	12.5
DA_10	150	702.60	696.70	0.039	0.15	9.4	1123	696.70	657.00	0.035	Unpaved	3.03	6.2			None					None		15.6	9.4
DA_11	150	691.40	689.60	0.012	0.15	15.1	478	689.60	679.80	0.021	Unpaved	2.31	3.4			None				4268	5	14.2	32.8	19.7
DA_12	150	697.40	693.30	0.027	0.15	10.9	168	693.30	688.30	0.030	Unpaved	2.78	1.0			None				3249	5	10.8	22.7	13.6
DA_13	150	707.60	706.00	0.011	0.15	15.9	1231	706.00	688.00	0.015	Unpaved	1.95	10.5			None				13426	5	44.8	71.1	42.7

Know what's below. Call before you dig.

N

0' 100' 200' 400'
SCALE IN FEET

C:\ACCADocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-3600 EXISTING DRAINAGE MAP 7/3/2025 2:51 PM

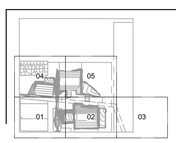
OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave,
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Tulsa, OK 74119
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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

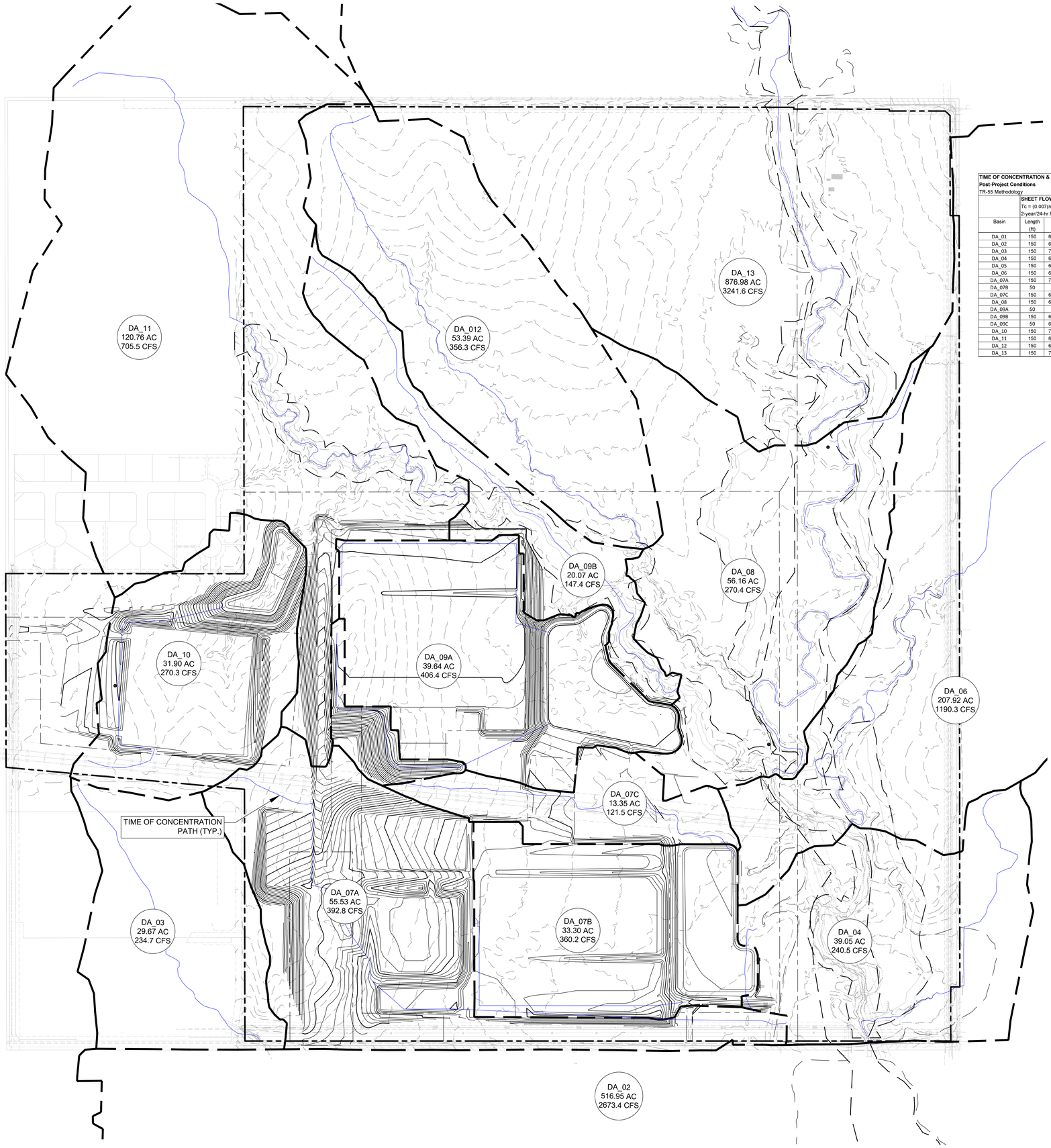
PROJ. NO.: 060007903

EXISTING DRAINAGE MAP

SCALE: 1" = 200'

SHEET NUMBER:
C-3600

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



TIME OF CONCENTRATION & LAG TIME
Post-Project Conditions
TR-55 Methodology

	SHEET FLOW Tc = (0.007(nL)^0.8)/(P2^0.5)(s^0.4) 2-year/24-hr Rainfall Depth (in) from NOAA Atlas 14 = 3.86						SHALLOW CONCENTRATED FLOW Tc = L / 60*V						ENCLOSED SYSTEM PIPE: Tc = L / 60*V Velocities assumed to be 7 ft/s.					OPEN CHANNEL FLOW Tc = L / 60*V Velocities assumed to be 5 ft/s.			TOTAL	
Basin	Length (ft)	$Elev_1$	$Elev_2$	Slope (ft/ft)	Manning's "n"	T_{t1} (min)	Length (ft)	$Elev_2$	$Elev_3$	Slope (ft/ft)	Condition R-55 Fig. 3	V_{avg} (ft/s)	T_{t2} (min)	Pipe Description	Length (ft)	Slope (ft/ft)	Velocity (ft/s)	T_{t3} (min)	ΣT_{t3} (min)	Length (ft)	Velocity (ft/s)	T_{t4} (min)	$T_{c TOTAL}$ (min)	T_{LAG} (min)
DA_01	150	621.70	618.30	0.023	0.15	11.7	492	618.30	604.10	0.029	Unpaved	2.74	3.0							3408	5	11.4	26.1	15.7
DA_02	150	650.40	646.80	0.024	0.15	11.5	1386	646.80	622.70	0.017	Unpaved	2.13	10.9							5644	5	18.8	41.1	24.7
DA_03	150	707.20	704.60	0.017	0.15	13.1	899	704.60	677.60	0.030	Unpaved	2.80	5.4							834	5	2.8	21.2	12.7
DA_04	150	637.50	630.30	0.048	0.15	8.7	887	630.30	611.40	0.021	Unpaved	2.36	6.3							1097	5	3.7	18.6	11.2
DA_05	150	624.40	621.40	0.020	0.15	12.3	157	621.40	617.50	0.025	Unpaved	2.54	1.0							226	5	0.8	14.1	8.5
DA_06	150	687.80	683.90	0.026	0.15	11.1	55	683.90	682.50	0.025	Unpaved	2.57	0.4							6730	5	22.4	33.9	20.3
DA_07A	150	705.60	700.00	0.037	0.15	9.6	353	700.00	678.70	0.060	Unpaved	3.96	1.5	Unknown	1,212	-	7.0	2.9	2.9	2268	5	7.6	21.5	12.9
DA_07B	50	Assume 1%		0.010	0.15	6.8	0	Assume 1%		0.010	Paved	2.03	0.0	Unknown	1,599	-	7.0	3.8	3.8		None		10.6	6.3
DA_07C	150	664.50	655.00	0.063	0.15	7.8	690	655.00	630.50	0.036	Unpaved	3.04	3.8				None			1229	5	4.1	15.7	9.4
DA_08	150	634.30	633.30	0.007	0.15	19.1	663	633.30	614.50	0.028	Unpaved	2.72	4.1				None			3406	5	11.4	34.6	20.7
DA_09A	50	Assume 1%		0.010	0.15	6.8	0	Assume 1%		0.010	Paved	2.03	0.0	Unknown	1,844	-	7.0	4.4	4.4		None		11.2	6.7
DA_09B	150	688.40	679.50	0.059	0.15	8.0	957	679.50	642.40	0.039	Unpaved	3.18	5.0				None			2355	5	7.9	20.9	12.5
DA_09C	50	660.50	660.10	0.008	0.15	7.4	354	660.10	656.60	0.010	Unpaved	1.60	3.7	Unknown	565	-	7.0	1.3	1.3	932	5	3.1	15.5	9.3
DA_10	150	708.30	704.80	0.023	0.15	11.6	277	704.80	694.60	0.037	Unpaved	3.10	1.5	Unknown	323	-	7.0	0.8	0.8	1118	5	3.7	17.6	10.6
DA_11	150	691.40	689.60	0.012	0.15	15.1	478	689.60	679.80	0.021	Unpaved	2.31	3.4				None			4268	5	14.2	32.8	19.7
DA_12	150	697.40	693.30	0.027	0.15	10.9	168	693.30	688.30	0.030	Unpaved	2.78	1.0				None			3249	5	10.8	22.7	13.6
DA_13	150	707.60	706.00	0.011	0.15	15.9	1231	706.00	688.00	0.015	Unpaved	1.95	10.5				None			13426	5	44.8	71.1	42.7

Post-Project Drainage Area Parameters

DA	Area (ac)	Area (mi^2)	CN	TC (min)	TC_{lag} (min)	Q_{100} (cfs)
DA_01	129.31	0.2020	82.33	26.1	15.7	835.7
DA_02	516.95	0.8077	83.23	41.1	24.7	2673.4
DA_03	29.67	0.0464	93.40	21.2	12.7	234.7
DA_04	38.54	0.0602	70.09	18.6	11.2	240.5
DA_05	1.23	0.0019	81.81	14.1	8.5	10.4
DA_06	207.92	0.3249	83.06	33.9	20.3	1190.3
DA_07A	50.36	0.0787	92.23	21.5	12.9	392.8
DA_07B	33.20	0.0519	94.70	10.6	6.3	360.2
DA_07C	13.35	0.0209	93.20	15.7	9.4	121.5
DA_08	56.16	0.0878	72.44	34.6	20.7	270.4
DA_09A	39.64	0.0619	94.64	11.2	6.7	406.4
DA_09B	20.07	0.0314	83.66	20.9	12.5	147.4
DA_09C	4.56	0.0071	94.41	15.5	9.3	43.4
DA_10	31.90	0.0499	90.85	17.6	10.6	270.3
DA_11	120.76	0.1887	83.48	32.8	19.7	705.5
DA_12	53.39	0.0834	79.44	22.7	13.6	356.3
DA_13	876.98	1.3703	81.26	71.1	42.7	3241.6

HEC-HMS Pond Results

Pond ID	Storm Event	Volume (ac-ft)	Water Surface Elevation (ft)	Q_{in} (cfs)	Q_{out} (cfs)
P_DA_07B (DC1)	002-YR	7.4	614.5	128.8	1.4
	005-YR	8.9	614.8	161.9	4.0
	010-YR	10.1	615.0	191.7	7.6
	050-YR	13.4	615.6	275.6	20.5
	100-YR	16.6	616.2	360.2	36.9
P_DA_09A (DC2)	002-YR	9.5	620.3	144.5	2.1
	005-YR	11.7	620.6	181.8	5.8
	010-YR	12.9	620.7	215.8	13.0
	050-YR	16.4	621.2	310.5	43.3
	100-YR	20.1	621.7	406.4	86.0
P_DA_10 (PSO)	002-YR	2.0	656.0	89.6	34.2
	005-YR	2.5	656.4	115.4	53.9
	010-YR	2.9	656.7	139.0	74.6
	050-YR	3.9	657.4	204.2	133.8
	100-YR	4.8	658.0	270.3	194.3

811 Know what's below. Call before you dig.

N

0' 100' 200' 400'
SCALE IN FEET

C:\ACCvACCDocs\Kimley-Horn\060057900_CYL1\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-3601 PROPOSED DRAINAGE MAP 9/17/2025 9:33 PM

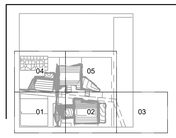
OTHER DISCIPLINES:

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CIVIL:

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1437 S Boulder Ave,
Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

PROJ. NO.: 060007903

PROPOSED DRAINAGE MAP

SCALE: 1" = 200'

SHEET NUMBER:
C-3601

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT

EROSION AND SEDIMENT CONTROL INFORMATION:

1. COMPREHENSIVE:

A. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO OR CONCURRENT WITH LAND-DISTURBING ACTIVITIES.

B. PROVISIONS TO PREVENT EROSION OF SOIL FROM THE SITE SHALL BE AT A MINIMUM IN CONFORMANCE WITH THE REQUIREMENTS OF THE OKLAHOMA DEPARTMENT OF TRANSPORTATION (ODOT) ROADWAY DRAINAGE MANUAL. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

C. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED BACK TO THE STANDARDS SPECIFIED IN THE OKLAHOMA DEPARTMENT OF TRANSPORTATION (ODOT) ROADWAY DRAINAGE MANUAL, CURRENT EDITION.

D. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

E. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO LAND DISTURBANCE. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

F. THE CONSTRUCTION OF THE SITE WILL COMMENCE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED WITH PERMANENT VEGETATION AND ALL ROADS/DRIVEWAYS HAVE BEEN PAVED.

G. CONSTRUCTION EXITS SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY OR EXIT FROM THE SITE AND SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE AS CONDITIONS DEMAND, REPAIR, AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OFF SITE ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. ACCESS POINTS PROTECTED WITH A CONSTRUCTION EXIT SHALL BE OTHERWISE BARRICADED UNTIL THE SITE IS STABILIZED.

H. ALL DISTURBED AREA ARE TO BE STABILIZED IN ACCORDANCE WITH THE OKLAHOMA GENERAL PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

2. GENERAL:

A. A MINIMUM OF 24 HOURS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE TULSA COUNTY BUILDING AND CODE SERVICES OFFICE.

B. ALL NEWLY CUT OR FILLED AREA, LACKING ADEQUATE VEGETATION, SHALL BE SEEDED, MULCHED, FERTILIZED, AND/OR SODDED AS REQUIRED TO EFFECTIVELY CONTROL SOIL EROSION.

C. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES.

D. ALL FILL SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY (ASTM D-698) WITHIN 3% OF OPTIMUM MOISTURE CONTENT IN LIFTS NOT TO EXCEED SIX INCHES OF COMPACTED THICKNESS.

E. ALL CONSTRUCTION MATERIALS AND PROCEDURES SHALL MEET OR EXCEED THE REQUIREMENTS OF THE TULSA COUNTY BUILDING AND CODE SERVICES OFFICE STANDARD CONSTRUCTION SPECIFICATIONS.

F. PROPERTY LINES SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. GRADING, CLEARING, AND THE ERECTION OR REMOVAL OF FENCES ALONG PROPERTY LINES SHALL BE FULLY COORDINATED WITH ADJACENT PROPERTY OWNERS.

G. VERIFY SITE CONDITIONS PRIOR TO CONSTRUCTION. NOTIFY THE TULSA COUNTY BUILDING AND CODE SERVICES OFFICE ENGINEER OF ANY VARIATIONS PRIOR TO COMMENCEMENT OF WORK.

H. ALL GRADING WORK SHALL BE PERFORMED IN SUCH A MANNER THAT ADJACENT PROPERTIES ARE NOT DAMAGED OR ADVERSELY AFFECTED.

I. LOT DRAINAGE: FINISH GRADE SHALL BE SLOPED AWAY FROM THE FOUNDATION FOR DRAINAGE. THE FINISH GRADE MUST BE AT LEAST 12 INCHES BELOW THE TOP OF THE FOUNDATION WALL OR THE GRADE OF THE CONCRETE SLAB AT THE INTERIOR IN THE CASE OF AN INTEGRAL SLAB AND FOUNDATION.

J. THE CONTRACTOR SHALL PROVIDE ADEQUATE AND EFFECTIVE EROSION CONTROL AS NECESSARY TO PREVENT ANY SILTATION INTO EXISTING DRAINAGE SYSTEM AND/OR ADJACENT PROPERTIES.

K. ALL EROSION CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING OPERATIONS AND BE MAINTAINED UNTIL ALL DISTURBED AREAS ON THE SITE HAVE BEEN RESTORED.

L. ALL TEMPORARY EROSION CONTROL INSTALLATIONS SHALL REMAIN IN PLACE AND BE MAINTAINED IN GOOD CONDITIONS BY THE CONTRACTOR UNTIL THE SITE HAS BEEN RE-VEGETATED, AT WHICH TIME IT SHALL BE REMOVED. FOR PROPOSED PAVED SURFACE AREAS, THE CONTRACTOR MAY REMOVE NECESSARY SILT FENCE TO CONSTRUCT ROADWAYS, WHILE MAINTAINING ADEQUATE EROSION CONTROL IN ADJACENT AREAS.

M. THE CONTRACTOR SHALL SCHEDULE SITE GRADING, UTILITY INSTALLATION AND ROADWAY CONSTRUCTION SO THAT THE GENERAL SITE CAN BE MULCHED AND RE-SEEDED SOON AFTER DISTURBANCE. ALL DISTURBED AREAS SHALL BE SEEDED AND MULCHED WITHIN 14 DAYS AFTER COMPLETION OF FINAL GRADING OR AFTER 14 DAYS OF GRADING INACTIVITY.

N. INSPECTIONS MUST BE PERFORMED BY AN EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) LEVEL I CERTIFIED PERSONNEL. ALL CONTROL MEASURES SHALL BE CHECKED, AND REPAIRED AS NECESSARY, TWICE WEEKLY AT LEAST 72 HOURS APART AND IN DRY PERIODS AND WITHIN 24 HOURS AFTER ANY RAINFALL OF 0.5 INCHES WITHIN A 24 HOUR PERIOD. DURING PROLONGED RAINFALL DAILY CHECKING AND REPAIRING IS NECESSARY. THE PERMITTEE SHALL MAINTAIN RECORDS OF CHECKS AND REPAIRS. A RAIN GAUGE MUST BE MAINTAINED AT THE CONSTRUCTION SITE.

O. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.

P. FABRIC SHOULD BE REPLACED PROMPTLY WHEN IT DECOMPOSES OR BECOMES INEFFECTIVE.

Q. ANY SEDIMENT REMAINING AFTER THE SILT FENCE OR FILTER FABRIC IS NO LONGER NEEDED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED WITH THE APPROPRIATE SEED MIX, AS DIRECTED BY THE ENGINEER.

R. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFUL PURPOSE, BUT NOT BEFORE THE UPWARD SLOPING AREA HAS BEEN PERMANENTLY STABILIZED.

S. IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ALL REQUIRED PERMITS HAVE BEEN OBTAINED PRIOR TO BEGINNING ANY CONSTRUCTION OR OTHER ACTIVITY ON THE SITE.

T. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SOIL EROSION CONTROL MEASURES AS NOTED ON THE PLANS AND AS REQUESTED BY THE OWNER DURING CONSTRUCTION. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR SATISFYING THE REQUIREMENTS OF THE STATE OF OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) . ALL SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE CONTROL SO AS TO PREVENT ANY SEDIMENT FROM WASHING OFF THE SITE ONTO ADJACENT PROPERTY OR PUBLIC RIGHTS-OF-WAY. THE CONTRACTOR SHALL MAINTAIN A LOG OF ALL MAINTENANCE ACTIVITIES FOR THE EROSION CONTROL ELEMENTS AS REQUIRED BY ODEQ.

U. A COPY OF THIS PLAN MUST BE AVAILABLE ON SITE.

V. EROSION AND SEDIMENT CONTROL MEASURES MUST BE IN PLACE AND FUNCTIONAL BEFORE EARTH MOVING OPERATIONS BEGIN, AND MUST BE CONSTRUCTED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORK DAY BUT MUST BE REPLACED AT THE END OF THE WORK DAY.

W. THE INTENT OF THE EROSION AND SEDIMENT CONTROL PLAN IS TO MINIMIZE THE RELEASE OF STORM WATER POLLUTANTS TO DOWNSTREAM PROPERTIES AND DRAINAGE SYSTEMS.

X. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES.

Y. CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.

Z. AREAS WHICH ARE NOT TO BE DISTURBED WILL BE CLEARLY MARKED BY FENCING, FLAGS, SIGNS, ETC.

AA. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

AB. ALL STORM SEWER INLETS THAT ARE TO BE USED FOR DRAINAGE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

AC. PERIODIC INSPECTIONS AND REQUIRED MAINTENANCE MUST BE PROVIDED, ESPECIALLY AFTER EACH SIGNIFICANT STORM. THE PROJECT SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES.

AD. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS WITH SLOPES GREATER THAN OR EQUAL TO 3:1 SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

AE. ALL PERIMETER CONTROL MEASURES MUST BE IN PLACE BEFORE ANY EARTH MOVING ACTIVITIES BEGIN.

AF. CONTRACTOR TO INSTALL ALL REQUIRED INITIAL EPSC MEASURES PER PLANS PRIOR TO ANY DEMOLITION OR CLEARING AND GRUBBING.

AG. NO IMPACTS TO ANY IDENTIFIED JURISDICTIONAL ENVIRONMENTAL FEATURES OF ANY KIND IS PERMITTED UNTIL APPROVAL BY ODEQ AND USACE. FOLLOWING APPROVAL ONLY IMPACTS TO FEATURES PERMITTED BY BOTH ODEQ AND USACE IS PERMITTED AND MUST COMPLY WITH PHASING AS IDENTIFIED IN PLANS.

AH. CONTRACTOR TO FIELD VERIFY EXISTING CONDITIONS SHOWN ON PLAN AND IMMEDIATELY NOTIFY ENGINEER/OWNER OF ANY DISCREPANCIES.

AI. FEATURES BEYOND THE LIMITS OF DISTURBANCE (LOD) AND WITHIN THE LOD, UNLESS IDENTIFIED FOR REMOVAL ON THE PLANS, SHALL BE PROTECTED IN PLACE (PIP) BY THE CONTRACTOR FOR THE DURATION OF THE WORK.

AJ. ANY EXISTING STRUCTURE, IMPROVEMENT, OR APPURTENANCE TO REMAIN THAT IS DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE IMMEDIATELY REPAIRED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

AK. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS AND GUIDELINES OF THE EROSION CONTROL PLAN AND SITE SWPPP.

AL. WHERE EXISTING GRADE IS AT A SLOPE STEEPER THAN ONE UNIT VERTICAL IN FIVE UNITS HORIZONTAL (20-PERCENT SLOPE) AND THE DEPTH OF THE FILL EXCEEDS 5 FEET, BENCHING SHALL BE PROVIDED.

AM. CONTRACTOR TO SEE ABBREVIATIONS LIST (SEE SHEET C-0001), FOR CLARIFICATION.

3. SEQUENCE OF CONSTRUCTION (PHASE 1):

A. INSTALL THE SWPPP INFORMATION SIGN AND POST REQUIRED DOCUMENTS NEAR THE PLANNED CONSTRUCTION EXIT AND WITHIN EASY ACCESS TO THE GENERAL PUBLIC WITHOUT ENTERING THE SITE.

B. STAKE/FLAG THE LOD (WHERE STAKING IS NOT POSSIBLE/PRACTICAL, THE LOD MUST BE CONSPICUOUSLY, AND PROMINENTLY, MARKED TO DENOTE THE BOUNDARY). LOD MUST REMAIN CONSPICUOUSLY MARKED THROUGHOUT THE ENTIRE CONSTRUCTION PROJECT.

C. INSTALL PERIMETER SEDIMENT CONTROL BMPS IN THE VICINITY OF, AND DOWN GRADIENT FROM, THE LOCATION OF THE PLANNED CONSTRUCTION EXIT, CONSTRUCTION OFFICE TRAILERS, AND TEMPORARY PARKING AND STORAGE AREAS. CLEAR ONLY THE MINIMUM AREA ABSOLUTELY NECESSARY TO INSTALL THESE PERIMETER CONTROL BMPS.

D. INSTALL STABILIZED CONSTRUCTION EXIT, WHEEL WASH STATION, AND SET THE PROJECT OFFICE TRAILERS. INSTALL REMAINING PERIMETER SEDIMENT CONTROL BMPS, AS SHOWN ON THE PLANS. CLEAR ONLY THE MINIMUM AREA NECESSARY TO INSTALL PERIMETER CONTROL BMPS.

E. CLEAR AREA NECESSARY TO INSTALL SEDIMENT BASINS. CONSTRUCT SEDIMENT BASINS WITH APPROPRIATE OUTFALL STRUCTURES, AS SPECIFIED ON THE PLANS.

F. STABILIZE SIDE SLOPES, BOTTOM AND ALL SIDES OF EMBANKMENTS OR SLOPES OF SEDIMENT BASINS IMMEDIATELY UPON COMPLETION, AS SPECIFIED IN THE SWPPP.

G. CLEAR AREA NECESSARY TO INSTALL DIVERSION CHANNELS, INCLUDING STOCKPILE AREA NECESSARY FOR SPOIL FROM THE REQUIRED STRUCTURAL SEDIMENT CONTROL BMP.

H. CONSTRUCT DIVERSION CHANNELS AS SHOWN ON PLANS. CONTRACTOR TO INSTALL DIVERSION DITCHES THROUGHOUT CONSTRUCTION AS NEEDED AS SITE IS MASS GRADED TO INTERCEPT RUNOFF AND DIRECT TO SEDIMENT BASINS.

I. STABILIZE SIDE SLOPES, BOTTOM AND ALL SIDES OF EMBANKMENTS OR SLOPES OF DIVERSION CHANNELS IMMEDIATELY UPON COMPLETION, AS SPECIFIED IN THE SWPPP.

4. SEQUENCE OF CONSTRUCTION (PHASE 2):

A. BEGIN CLEARING, GRUBBING, AND STRIPPING THE SITE, (PHASE CLEARING AND GRUBBING TO THE EXTENT PRACTICAL TO MINIMIZE THE AMOUNT OF AREA DISTURBED AT ANY POINT IN TIME).

B. BEGIN GRADING THE SITE TO FINAL MASS GRADING CONDITION AS SHOWN IN THE PLANS.

C. TEMPORARILY STABILIZE THROUGHOUT CONSTRUCTION IMMEDIATELY FOLLOWING THE COMPLETION OF THE MOST RECENT LAND DISTURBING/GRADING ACTIVITY, ANY DISTURBED AREAS, INCLUDING MATERIAL STOCKPILES THAT ARE SCHEDULED OR LIKELY TO REMAIN INACTIVE FOR 7 DAYS OR MORE.

D. INSTALL FINAL OUTLET CONTROL STRUCTURE WITHIN THE SEDIMENT BASINS FOR FINAL DETENTION FUNCTIONALITY.

D.1. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT TO ENSURE FINAL GRADES ARE RE-ESTABLISHED PRIOR TO INSTALLING OUTLET STRUCTURES.

E. IMMEDIATELY PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.

F. COMPLETE GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL AREAS.

G. CONTINUE REQUIRED INSPECTIONS AND REPORTING UNTIL THE SITE IS READY TO TERMINATE AND A NOTICE OF TERMINATION IS SUBMITTED TO THE STATE.

NOTE: THE SEQUENCE OF CONSTRUCTION SHOWN ABOVE IS A GENERAL OVERVIEW AND IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS INCLUDED IN THESE PLANS. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ALL OTHER APPLICABLE LAWS.

4. SEEDING NOTES:

A. REFER TO ODOT SPECIFICATIONS FOR TEMPORARY SEEDING REQUIREMENTS.

B. REFER TO SPS LANDSCAPE PLANS BY KIMLEY-HORN FOR FINAL SEEDING AND SODDING SPECIFICATIONS.

Know what's below. Call before you dig.

C:\ACCACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4000 EROSION CONTROL NOTES 6/17/2025 5:15 PM

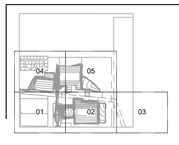
OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave,
Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING
(NOT FOR CONSTRUCTION)
2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

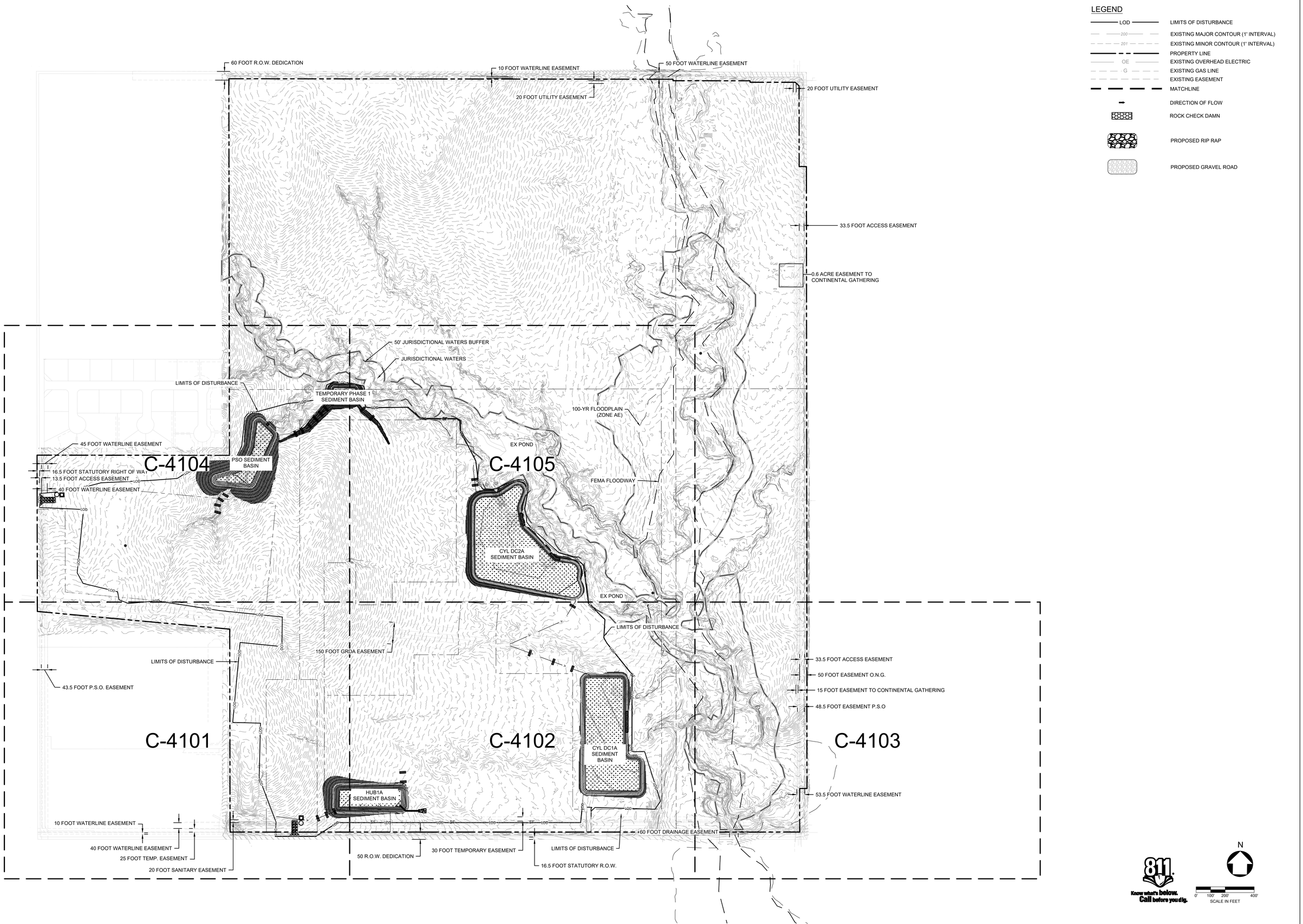
PROJ. NO.: 060007903

EROSION CONTROL NOTES

SCALE: N/A

SHEET NUMBER:
C-4000

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



C:\ACCA\ACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4100 EROSION CONTROL PLAN - PHASE 1 OVERALL 6/17/2025 4:08 PM

OTHER DISCIPLINES:

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1917 South 67th Street
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Ph. (402) 399-1000

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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17

KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
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DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

PROJ. NO.: 060007903

EROSION CONTROL PLAN - PHASE 1 OVERALL

SCALE: 1" = 200'

SHEET NUMBER:
C-4100

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT

MATCHLINE SEE SHEET C-4104

PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC

150 FOOT GRDA EASEMENT

LIMITS OF DISTURBANCE

PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC POWER POLE (TYP.)

HUB1 DA
518587.43 SQ FT
11.91 ACRES

DIVERSION DITCH #1
SEE SHEET C-4502
DITCHES TO BE CONSTRUCTED AS MASS GRADING MOVES FORWARD WITH ELEVATION CHANGE AS SITE IS BUILT UP

30 FOOT TEMPORARY EASEMENT
20 FOOT SANITARY EASEMENT
40 FOOT WATERLINE EASEMENT
25 FOOT TEMPORARY EASEMENT
50 FOOT R.O.W. DEDICATION
16.5 FOOT STATUTORY R.O.W.

PROPOSED 18" STORM CULVERT

MATCHLINE SEE SHEET C-4102

N. YALE AVE.

E. 76TH ST. N.

LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- 200 — EXISTING MAJOR CONTOUR (1' INTERVAL)
- 201 — EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
- G — EXISTING GAS LINE
- EXISTING EASEMENT
- DRAINAGE AREA BOUNDARY
- DIRECTION OF FLOW
- ROCK CHECK DAMN
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- EROSION CONTROL BLANKET WITH TEMPORARY SEED MIX (ALL SLOPES 1% OR GREATER)
- PERMANENT STABILIZATION
- CD — ROCK CHECK DAM (SEE DETAIL SHEET C-4500)
- CE — CONSTRUCTION ENTRANCE (SEE DETAIL SHEET C-4500)
- CW — CONCRETE WASHOUT AREA (SEE DETAIL SHEET C-4501)
- DD — DIVERSION DITCH (SEE DETAIL SHEET C-4502)
- EB — EROSION CONTROL BLANKET (SEE DETAIL SHEET C-4500)
- FL — FIBER LOG (SEE DETAIL SHEET C-4501)
- FO — SILT FENCE OUTLET (SEE DETAIL SHEET C-4500)
- FR — STONE FILTER RING (SEE DETAIL SHEET C-4502)
- IP — INLET PROTECTION (SEE DETAIL SHEET C-4501)
- JB — TEMPORARY JUTE NET BAFFLE (SEE DETAIL SHEET C-4502)
- JH — SILT FENCE J-HOOK (SEE DETAIL SHEET C-4502)
- OP — OUTLET PROTECTION (SEE DETAIL SHEET C-4500)
- SB — SEDIMENT BASIN WITH PIPE OUTLET (SEE DETAIL SHEET C-4502)
- SD — TEMPORARY SLOPE DRAIN (SEE DETAIL SHEET C-4501)
- SF — SILT FENCE (SEE DETAIL SHEET C-4500)
- SK — FAIRCLOTH SKIMMER (SEE DETAIL SHEET C-4502)
- WW — WHEEL WASH (SEE DETAIL SHEET C-4500)
- E1 — SEDIMENT BASIN PHASE 1 (SEE DETAIL E1 ON SHEET C-4502)
- E2 — SEDIMENT BASIN PHASE 2 (SEE DETAIL E2 ON SHEET C-4502)

NOTES

1. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS AND GUIDELINES OF THE EROSION CONTROL NOTES (SHEET C-4000), EROSION CONTROL PLANS (SHEETS C-4100-C-4205), DETAILS (SHEETS C-4500-C-4502), AND SITE SWPPP.
2. CONTRACTOR TO SEE ABBREVIATIONS LIST (SEE SHEET C-0001), FOR CLARIFICATION.
3. FOLLOW CONSTRUCTION SEQUENCING FOR PHASE 1 AND 2 OUTLINED ON SHEET C-4000.

811 Know what's below. Call before you dig.

N

0' 30' 60' 120'
SCALE IN FEET

C:\ACC\ACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4101 EROSION CONTROL PLAN - PHASE 1.dwg 9/18/2025 12:23 AM

OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave, Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING
(NOT FOR CONSTRUCTION)
2025-09-17

KEYPLAN

REVISIONS			DRAWN:
NO.	DATE	DESCRIPTION	
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT	
			APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

PROJ. NO.: 060007903

EROSION CONTROL PLAN - PHASE 1

SCALE: 1" = 60'

SHEET NUMBER:
C-4101

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT

MATCHLINE SEE SHEET C-4105

MATCHLINE SEE SHEET C-4101

MATCHLINE SEE SHEET C-4103

150 FOOT GRDA EASEMENT

PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC

PROTECT IN PLACE EXISTING OVERHEAD ELECTRIC POWER POLE (TYP.)

DIVERSION DITCH #3 SEE SHEET C-4502 DITCHES TO BE CONSTRUCTED AS MASS GRADING MOVES FORWARD WITH ELEVATION CHANGE AS SITE IS BUILT UP

DIVERSION DITCH #2 SEE SHEET C-4502 DITCHES TO BE CONSTRUCTED AS MASS GRADING MOVES FORWARD WITH ELEVATION CHANGE AS SITE IS BUILT UP

EX. POND

50' JURISDICTIONAL WATERS BUFFER

JURISDICTIONAL WATERS. NO IMPACT ZONE.

FEMA FLOODWAY

100-YR FLOODPLAIN (ZONE AE)

LIMITS OF DISTURBANCE

EMERGENCY SPILLWAY. SEE C-3500 FOR DETAILS.

DC1 DA
2629548.95 SQ FT
60.37 ACRES

CYL DC1A SEDIMENT BASIN BOTTOM OF BASIN ELEVATION VARIES

HUB1A SEDIMENT BASIN BOTTOM OF BASIN ELEVATION VARIES

PROPOSED 8' X 4' BOX CULVERT TO DAYLIGHT IN THIS LOCATION IN PHASE 1 EROSION CONTROL.

INSTALL 148 SY OF CLASS 4 RIPRAP (14") (4.0' DEPTH)

30 FOOT TEMPORARY EASEMENT

20 FOOT SANITARY EASEMENT

40 FOOT WATERLINE EASEMENT

16.5 FOOT STATUTORY R.O.W.

50 FOOT R.O.W. DEDICATION

25 FOOT TEMPORARY EASEMENT

E. 76TH ST. N.

LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- EXISTING MAJOR CONTOUR (1' INTERVAL)
- EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
- G — EXISTING GAS LINE
- EXISTING EASEMENT
- DRAINAGE AREA BOUNDARY
- DIRECTION OF FLOW
- ROCK CHECK DAMN
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- EROSION CONTROL BLANKET WITH TEMPORARY SEED MIX (ALL SLOPES 1% OR GREATER)
- PERMANENT STABILIZATION
- CD — ROCK CHECK DAM (SEE DETAIL SHEET C-4500)
- CE — CONSTRUCTION ENTRANCE (SEE DETAIL SHEET C-4500)
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- OP — OUTLET PROTECTION (SEE DETAIL SHEET C-4500)
- SB — SEDIMENT BASIN WITH PIPE OUTLET (SEE DETAIL SHEET C-4502)
- SD — TEMPORARY SLOPE DRAIN (SEE DETAIL SHEET C-4501)
- SF — SILT FENCE (SEE DETAIL SHEET C-4500)
- SK — FAIRCLOTH SKIMMER (SEE DETAIL SHEET C-4502)
- WW — WHEEL WASH (SEE DETAIL SHEET C-4500)
- E1 — SEDIMENT BASIN PHASE 1 (SEE DETAIL E1 ON SHEET C-4502)
- E2 — SEDIMENT BASIN PHASE 2 (SEE DETAIL E2 ON SHEET C-4502)

NOTES

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2. CONTRACTOR TO SEE ABBREVIATIONS LIST (SEE SHEET C-0001), FOR CLARIFICATION.
3. FOLLOW CONSTRUCTION SEQUENCING FOR PHASE 1 AND 2 OUTLINED ON SHEET C-4000.

811 Know what's below. Call before you dig.

N

0' 30' 60' 120'
SCALE IN FEET

C:\ACCACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4101 EROSION CONTROL PLAN - PHASE 1 9/18/2025 12:23 AM

OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
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Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17

KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

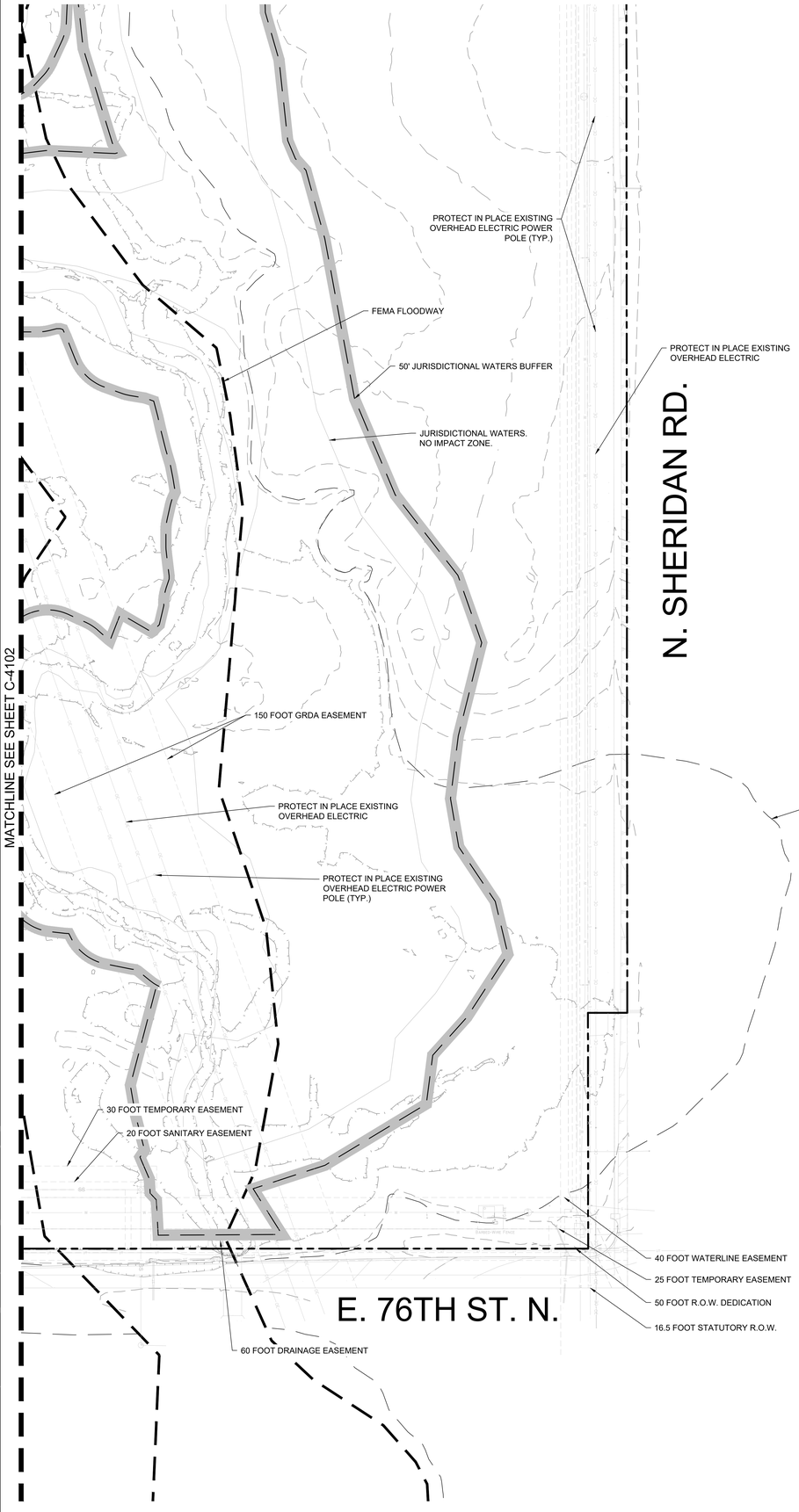
PROJ. NO.: 060007903

EROSION CONTROL PLAN - PHASE 1

SCALE: 1" = 60'

SHEET NUMBER:
C-4102

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



MATCHLINE SEE SHEET C-4102

C:\ACC\ACCDocs\Kimley-Horn\060057900_CYL1\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4101 EROSION CONTROL PLAN - PHASE 1 9/18/2025 12:23 AM

LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- 200 — EXISTING MAJOR CONTOUR (1' INTERVAL)
- 201 — EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
- G — EXISTING GAS LINE
- EXISTING EASEMENT
- DRAINAGE AREA BOUNDARY
- DIRECTION OF FLOW
- ROCK CHECK DAMN
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- EROSION CONTROL BLANKET WITH TEMPORARY SEED MIX (ALL SLOPES 1% OR GREATER)
- PERMANENT STABILIZATION
- CD — ROCK CHECK DAM (SEE DETAIL SHEET C-4500)
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- SK — FAIRCLOTH SKIMMER (SEE DETAIL SHEET C-4502)
- WW — WHEEL WASH (SEE DETAIL SHEET C-4500)
- E1 — SEDIMENT BASIN PHASE 1 (SEE DETAIL E1 ON SHEET C-4502)
- E2 — SEDIMENT BASIN PHASE 2 (SEE DETAIL E2 ON SHEET C-4502)

NOTES

1. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS AND GUIDELINES OF THE EROSION CONTROL NOTES (SHEET C-4000), EROSION CONTROL PLANS (SHEETS C-4100-C-4205), DETAILS (SHEETS C-4500-C-4502), AND SITE SWPPP.
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811. Know what's below. Call before you dig.

N

0' 30' 60' 120'
SCALE IN FEET

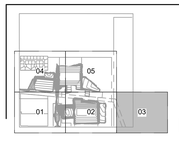
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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS			DRAWN:
NO.	DATE	DESCRIPTION	
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT	
			APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

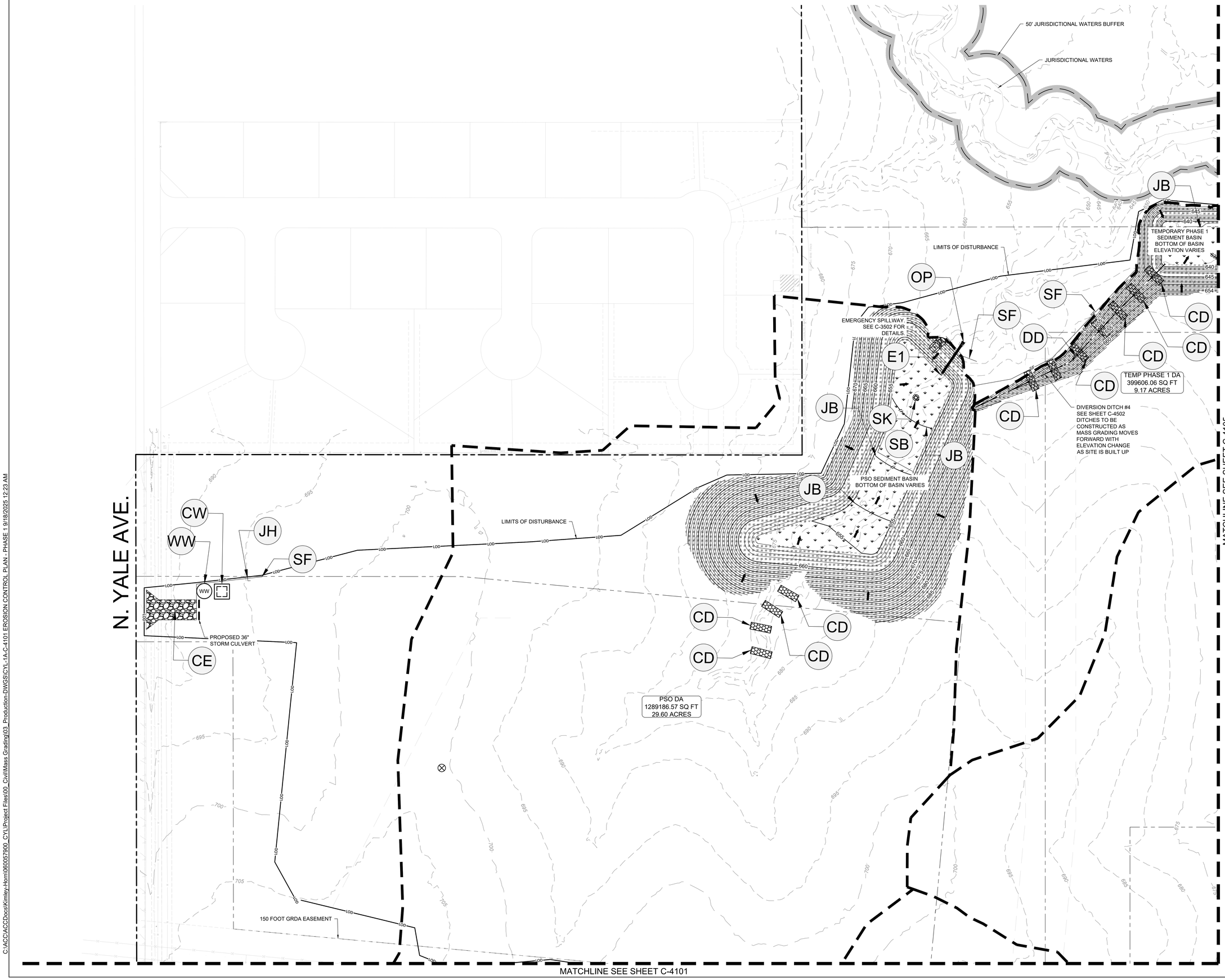
PROJ. NO.: 060007903

EROSION CONTROL PLAN - PHASE 1

SCALE: 1" = 60'

SHEET NUMBER:
C-4103

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- EXISTING MAJOR CONTOUR (1' INTERVAL)
- EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
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- ROCK CHECK DAMN
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- WW — WHEEL WASH (SEE DETAIL SHEET C-4500)
- E1 — SEDIMENT BASIN PHASE 1 (SEE DETAIL E1 ON SHEET C-4502)
- E2 — SEDIMENT BASIN PHASE 2 (SEE DETAIL E2 ON SHEET C-4502)

NOTES

1. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS AND GUIDELINES OF THE EROSION CONTROL NOTES (SHEET C-4000), EROSION CONTROL PLANS (SHEETS C-4100-C-4205), DETAILS (SHEETS C-4500-C-4502), AND SITE SWPPP.
2. CONTRACTOR TO SEE ABBREVIATIONS LIST (SEE SHEET C-0001), FOR CLARIFICATION.
3. FOLLOW CONSTRUCTION SEQUENCING FOR PHASE 1 AND 2 OUTLINED ON SHEET C-4000.

811 Know what's below. Call before you dig.

N

0' 30' 60' 120'
SCALE IN FEET

C:\ACCVACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4101 EROSION CONTROL PLAN - PHASE 1 9/18/2025 12:23 AM

OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave,
Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17

KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

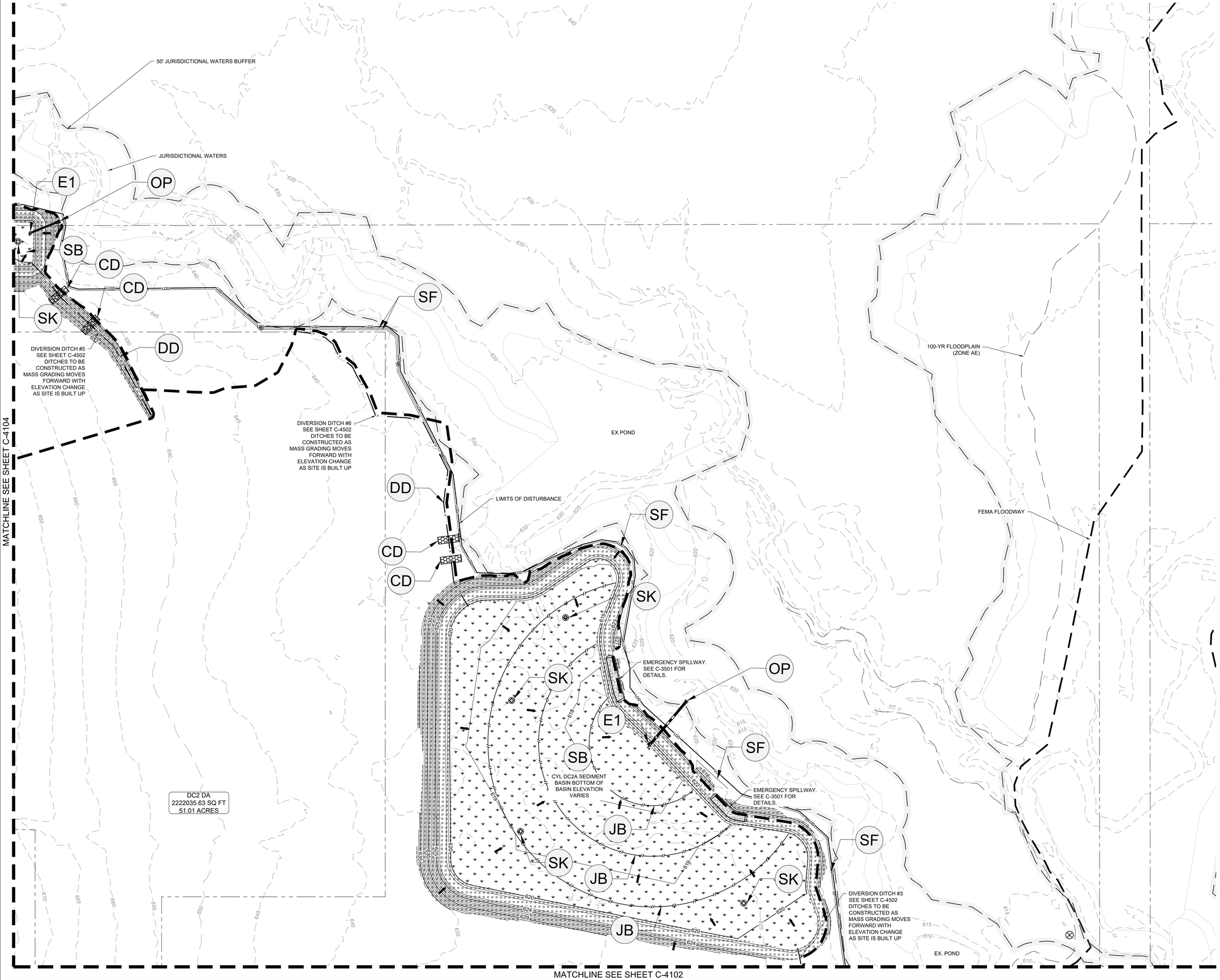
PROJ. NO.: 060007903

EROSION CONTROL PLAN - PHASE 1

SCALE: 1" = 60'

SHEET NUMBER:
C-4104

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- EXISTING MAJOR CONTOUR (1' INTERVAL)
- EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
- G — EXISTING GAS LINE
- EXISTING EASEMENT
- DRAINAGE AREA BOUNDARY
- DIRECTION OF FLOW
- ROCK CHECK DAMN
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- EROSION CONTROL BLANKET WITH TEMPORARY SEED MIX (ALL SLOPES 1% OR GREATER)
- PERMANENT STABILIZATION
- CD — ROCK CHECK DAM (SEE DETAIL SHEET C-4500)
- CE — CONSTRUCTION ENTRANCE (SEE DETAIL SHEET C-4500)
- CW — CONCRETE WASHOUT AREA (SEE DETAIL SHEET C-4501)
- DD — DIVERSION DITCH (SEE DETAIL SHEET C-4502)
- EB — EROSION CONTROL BLANKET (SEE DETAIL SHEET C-4500)
- FL — FIBER LOG (SEE DETAIL SHEET C-4501)
- FO — SILT FENCE OUTLET (SEE DETAIL SHEET C-4500)
- FR — STONE FILTER RING (SEE DETAIL SHEET C-4502)
- IP — INLET PROTECTION (SEE DETAIL SHEET C-4501)
- JB — TEMPORARY JUTE NET BAFFLE (SEE DETAIL SHEET C-4502)
- JH — SILT FENCE J-HOOK (SEE DETAIL SHEET C-4502)
- OP — OUTLET PROTECTION (SEE DETAIL SHEET C-4500)
- SB — SEDIMENT BASIN WITH PIPE OUTLET (SEE DETAIL SHEET C-4502)
- SD — TEMPORARY SLOPE DRAIN (SEE DETAIL SHEET C-4501)
- SF — SILT FENCE (SEE DETAIL SHEET C-4500)
- SK — FAIRCLOTH SKIMMER (SEE DETAIL SHEET C-4502)
- WW — WHEEL WASH (SEE DETAIL SHEET C-4500)
- E1 — SEDIMENT BASIN PHASE 1 (SEE DETAIL E1 ON SHEET C-4502)
- E2 — SEDIMENT BASIN PHASE 2 (SEE DETAIL E2 ON SHEET C-4502)

NOTES

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N

0' 30' 60' 120'
SCALE IN FEET

C:\ACCVACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4101 EROSION CONTROL PLAN - PHASE 1 9/18/2025 12:23 AM

OTHER DISCIPLINES:

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CIVIL:

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Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17

KEYPLAN

REVISIONS			DRAWN:
NO.	DATE	DESCRIPTION	
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT	
			APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

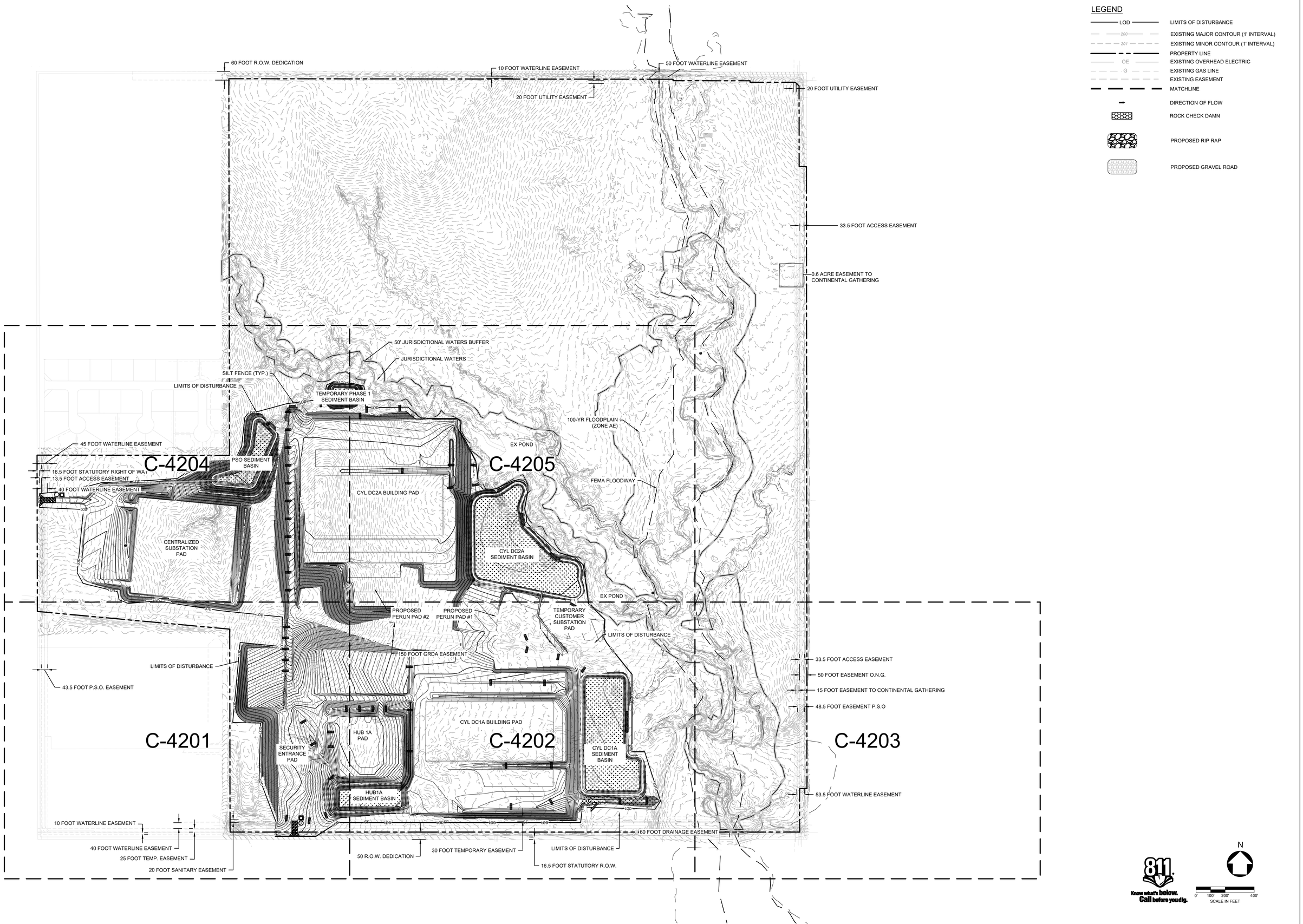
PROJ. NO.: 060007903

EROSION CONTROL PLAN - PHASE 1

SCALE: 1" = 60'

SHEET NUMBER:
C-4105

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



C:\ACCACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4200 EROSION CONTROL PLAN - PHASE 2 OVERALL 6/17/2025 4:08 PM

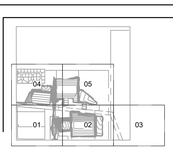
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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

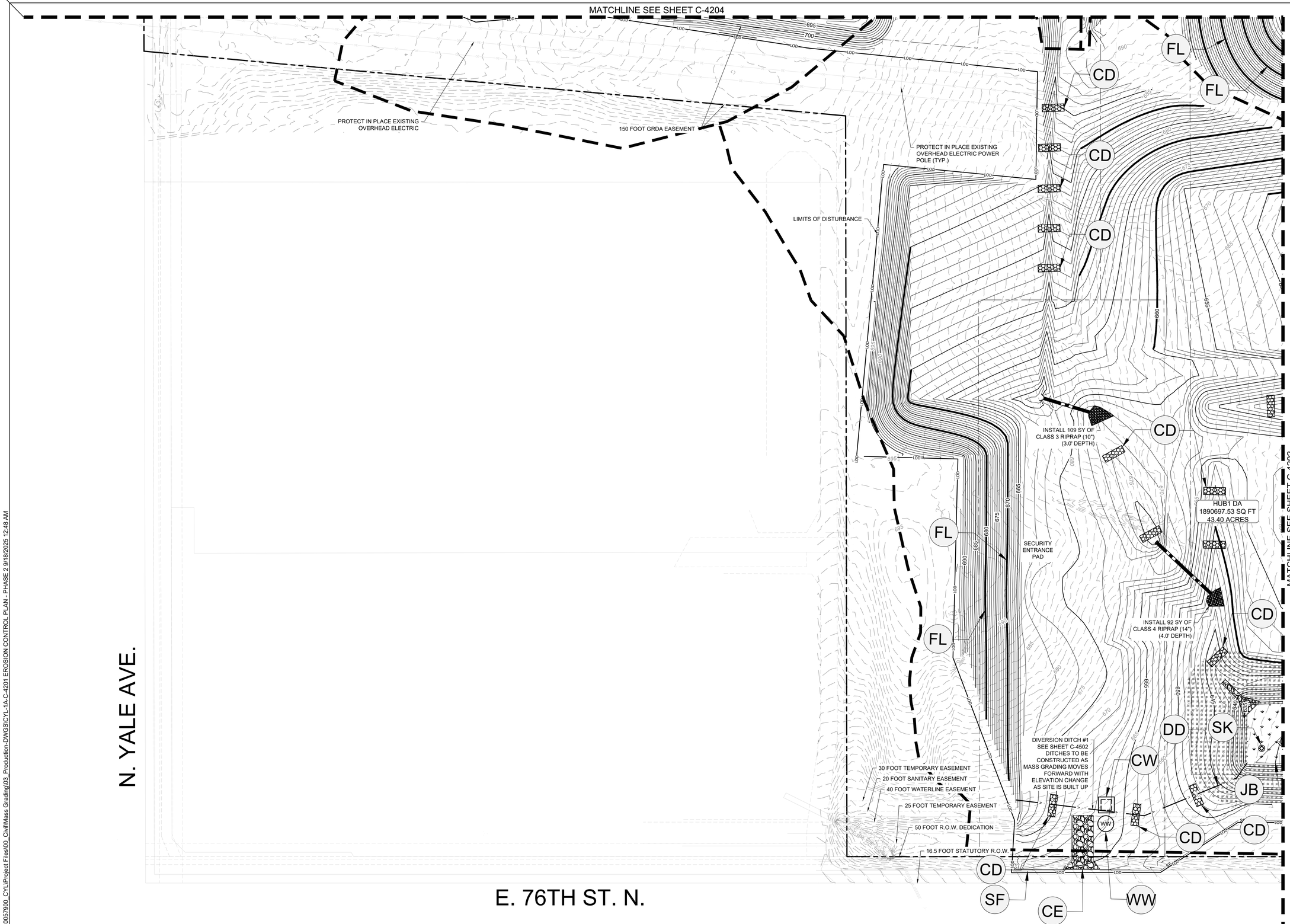
PROJ. NO.: 060007903

EROSION CONTROL PLAN - PHASE 2 OVERALL

SCALE: 1" = 200'

SHEET NUMBER:
C-4200

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- 200 — EXISTING MAJOR CONTOUR (1' INTERVAL)
- 201 — EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
- G — EXISTING GAS LINE
- EXISTING EASEMENT
- DRAINAGE AREA BOUNDARY
- DIRECTION OF FLOW
- ROCK CHECK DAMN
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- EROSION CONTROL BLANKET WITH TEMPORARY SEED MIX (ALL SLOPES 1% OR GREATER)
- PERMANENT STABILIZATION
- CD — ROCK CHECK DAM (SEE DETAIL SHEET C-4500)
- CE — CONSTRUCTION ENTRANCE (SEE DETAIL SHEET C-4500)
- CW — CONCRETE WASHOUT AREA (SEE DETAIL SHEET C-4501)
- DD — DIVERSION DITCH (SEE DETAIL SHEET C-4502)
- EB — EROSION CONTROL BLANKET (SEE DETAIL SHEET C-4500)
- FL — FIBER LOG (SEE DETAIL SHEET C-4501)
- FO — SILT FENCE OUTLET (SEE DETAIL SHEET C-4500)
- FR — STONE FILTER RING (SEE DETAIL SHEET C-4502)
- IP — INLET PROTECTION (SEE DETAIL SHEET C-4501)
- JB — TEMPORARY JUTE NET BAFFLE (SEE DETAIL SHEET C-4502)
- JH — SILT FENCE J-HOOK (SEE DETAIL SHEET C-4502)
- OP — OUTLET PROTECTION (SEE DETAIL SHEET C-4500)
- SB — SEDIMENT BASIN WITH PIPE OUTLET (SEE DETAIL SHEET C-4502)
- SD — TEMPORARY SLOPE DRAIN (SEE DETAIL SHEET C-4501)
- SF — SILT FENCE (SEE DETAIL SHEET C-4500)
- SK — FAIRCLOTH SKIMMER (SEE DETAIL SHEET C-4502)
- WW — WHEEL WASH (SEE DETAIL SHEET C-4500)
- E1 — SEDIMENT BASIN PHASE 1 (SEE DETAIL E1 ON SHEET C-4502)
- E2 — SEDIMENT BASIN PHASE 2 (SEE DETAIL E2 ON SHEET C-4502)

NOTES

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2. CONTRACTOR TO SEE ABBREVIATIONS LIST (SEE SHEET C-0001), FOR CLARIFICATION.
3. FOLLOW CONSTRUCTION SEQUENCING FOR PHASE 1 AND 2 OUTLINED ON SHEET C-4000.

811 Know what's below. Call before you dig.

N

0' 100' 200' 400'
SCALE IN FEET

C:\ACCVACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4201 EROSION CONTROL PLAN - PHASE 2 9/18/2025 12:48 AM

OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave,
Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING
(NOT FOR CONSTRUCTION)
2025-09-17

KEYPLAN

REVISIONS			DRAWN:
NO.	DATE	DESCRIPTION	
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT	
			APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

PROJ. NO.: 060057903

EROSION CONTROL PLAN - PHASE 2

SCALE: 1" = 60'

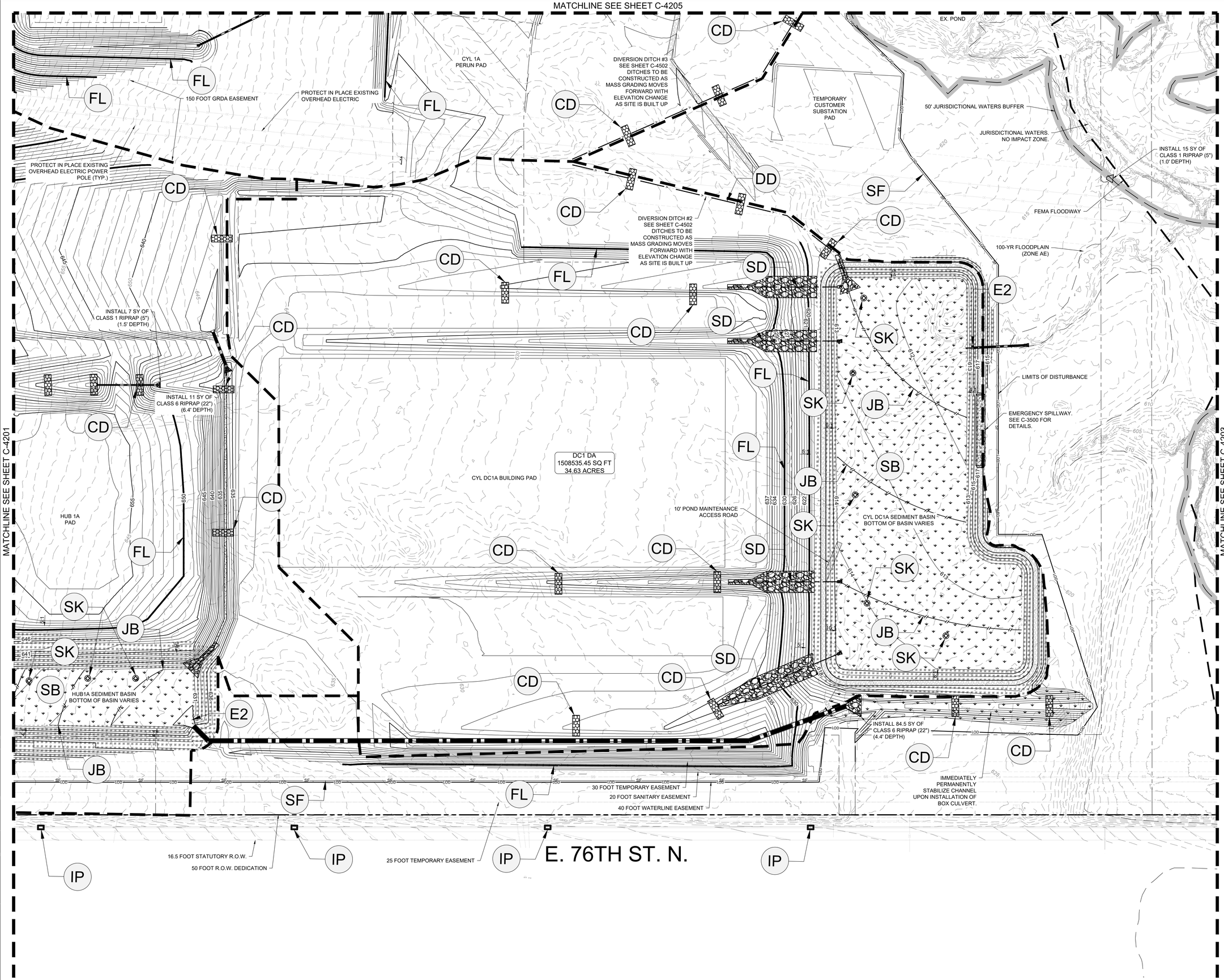
SHEET NUMBER:
C-4201

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT

MATCHLINE SEE SHEET C-4205

MATCHLINE SEE SHEET C-4201

MATCHLINE SEE SHEET C-4203



LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- EXISTING MAJOR CONTOUR (1' INTERVAL)
- EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
- G — EXISTING GAS LINE
- EXISTING EASEMENT
- DRAINAGE AREA BOUNDARY
- DIRECTION OF FLOW
- ROCK CHECK DAMN
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- EROSION CONTROL BLANKET WITH TEMPORARY SEED MIX (ALL SLOPES 1% OR GREATER)
- PERMANENT STABILIZATION
- CD — ROCK CHECK DAM (SEE DETAIL SHEET C-4500)
- CE — CONSTRUCTION ENTRANCE (SEE DETAIL SHEET C-4500)
- CW — CONCRETE WASHOUT AREA (SEE DETAIL SHEET C-4501)
- DD — DIVERSION DITCH (SEE DETAIL SHEET C-4502)
- EB — EROSION CONTROL BLANKET (SEE DETAIL SHEET C-4500)
- FL — FIBER LOG (SEE DETAIL SHEET C-4501)
- FO — SILT FENCE OUTLET (SEE DETAIL SHEET C-4500)
- FR — STONE FILTER RING (SEE DETAIL SHEET C-4502)
- IP — INLET PROTECTION (SEE DETAIL SHEET C-4501)
- JB — TEMPORARY JUTE NET BAFFLE (SEE DETAIL SHEET C-4502)
- JH — SILT FENCE J-HOOK (SEE DETAIL SHEET C-4502)
- OP — OUTLET PROTECTION (SEE DETAIL SHEET C-4500)
- SB — SEDIMENT BASIN WITH PIPE OUTLET (SEE DETAIL SHEET C-4502)
- SD — TEMPORARY SLOPE DRAIN (SEE DETAIL SHEET C-4501)
- SF — SILT FENCE (SEE DETAIL SHEET C-4500)
- SK — FAIRCLOTH SKIMMER (SEE DETAIL SHEET C-4502)
- WW — WHEEL WASH (SEE DETAIL SHEET C-4500)
- E1 — SEDIMENT BASIN PHASE 1 (SEE DETAIL E1 ON SHEET C-4502)
- E2 — SEDIMENT BASIN PHASE 2 (SEE DETAIL E2 ON SHEET C-4502)

NOTES

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N

0' 100' 200' 400'
SCALE IN FEET

C:\ACCACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4201 EROSION CONTROL PLAN - PHASE 2 9/18/2025 12:48 AM

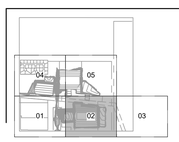
OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave,
Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS			DRAWN:
NO.	DATE	DESCRIPTION	
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT	
			APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

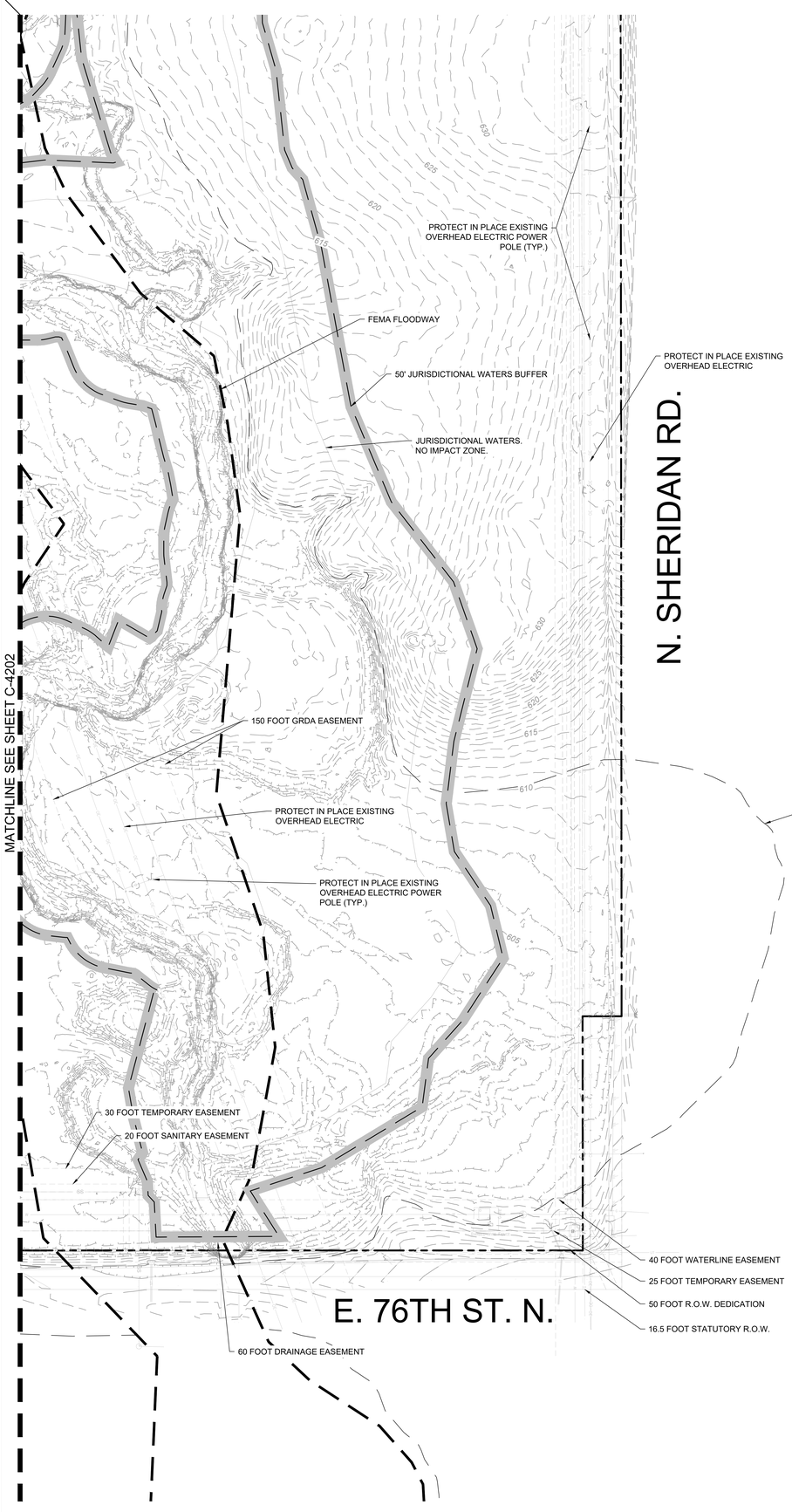
PROJ. NO.: 060007903

EROSION CONTROL PLAN - PHASE 2

SCALE: 1" = 60'

SHEET NUMBER:
C-4202

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



MATCHLINE SEE SHEET C-4202

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LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- 200 — EXISTING MAJOR CONTOUR (1' INTERVAL)
- 201 — EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
- G — EXISTING GAS LINE
- EXISTING EASEMENT
- DRAINAGE AREA BOUNDARY
- DIRECTION OF FLOW
- ROCK CHECK DAMN
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- EROSION CONTROL BLANKET WITH TEMPORARY SEED MIX (ALL SLOPES 1% OR GREATER)
- PERMANENT STABILIZATION
- CD — ROCK CHECK DAM (SEE DETAIL SHEET C-4500)
- CE — CONSTRUCTION ENTRANCE (SEE DETAIL SHEET C-4500)
- CW — CONCRETE WASHOUT AREA (SEE DETAIL SHEET C-4501)
- DD — DIVERSION DITCH (SEE DETAIL SHEET C-4502)
- EB — EROSION CONTROL BLANKET (SEE DETAIL SHEET C-4500)
- FL — FIBER LOG (SEE DETAIL SHEET C-4501)
- FO — SILT FENCE OUTLET (SEE DETAIL SHEET C-4500)
- FR — STONE FILTER RING (SEE DETAIL SHEET C-4502)
- IP — INLET PROTECTION (SEE DETAIL SHEET C-4501)
- JB — TEMPORARY JUTE NET BAFFLE (SEE DETAIL SHEET C-4502)
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- OP — OUTLET PROTECTION (SEE DETAIL SHEET C-4500)
- SB — SEDIMENT BASIN WITH PIPE OUTLET (SEE DETAIL SHEET C-4502)
- SD — TEMPORARY SLOPE DRAIN (SEE DETAIL SHEET C-4501)
- SF — SILT FENCE (SEE DETAIL SHEET C-4500)
- SK — FAIRCLOTH SKIMMER (SEE DETAIL SHEET C-4502)
- WW — WHEEL WASH (SEE DETAIL SHEET C-4500)
- E1 — SEDIMENT BASIN PHASE 1 (SEE DETAIL E1 ON SHEET C-4502)
- E2 — SEDIMENT BASIN PHASE 2 (SEE DETAIL E2 ON SHEET C-4502)

NOTES

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N

0' 100' 200' 400'
SCALE IN FEET

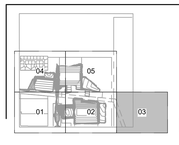
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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

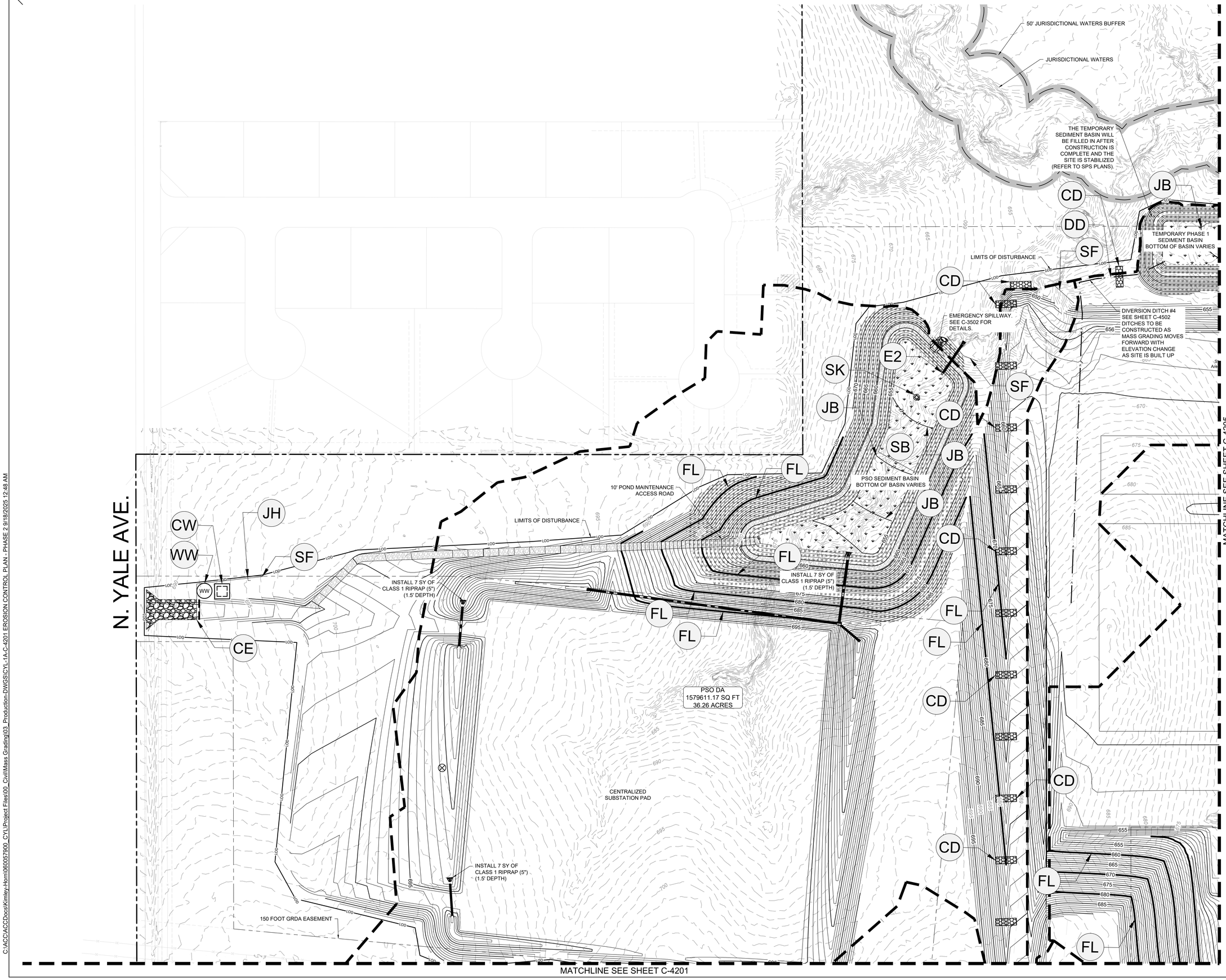
PROJ. NO.: 060007903

EROSION CONTROL PLAN - PHASE 2

SCALE: 1" = 60'

SHEET NUMBER:
C-4203

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- 200 — EXISTING MAJOR CONTOUR (1' INTERVAL)
- 201 — EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
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- DIRECTION OF FLOW
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- EROSION CONTROL BLANKET WITH TEMPORARY SEED MIX (ALL SLOPES 1% OR GREATER)
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- EB — EROSION CONTROL BLANKET (SEE DETAIL SHEET C-4500)
- FL — FIBER LOG (SEE DETAIL SHEET C-4501)
- FO — SILT FENCE OUTLET (SEE DETAIL SHEET C-4500)
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- IP — INLET PROTECTION (SEE DETAIL SHEET C-4501)
- JB — TEMPORARY JUTE NET BAFFLE (SEE DETAIL SHEET C-4502)
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- OP — OUTLET PROTECTION (SEE DETAIL SHEET C-4500)
- SB — SEDIMENT BASIN WITH PIPE OUTLET (SEE DETAIL SHEET C-4502)
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- SK — FAIRCLOTH SKIMMER (SEE DETAIL SHEET C-4502)
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- E2 — SEDIMENT BASIN PHASE 2 (SEE DETAIL E2 ON SHEET C-4502)

NOTES

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N

0' 30' 60' 120'
SCALE IN FEET

C:\ACCACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4201 EROSION CONTROL PLAN - PHASE 2 9/18/2025 12:48 AM

OTHER DISCIPLINES:

HDR, Inc.
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Ph. (402) 399-1000

CIVIL:

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CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17

KEYPLAN

REVISIONS			DRAWN:
NO.	DATE	DESCRIPTION	
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT	
			APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

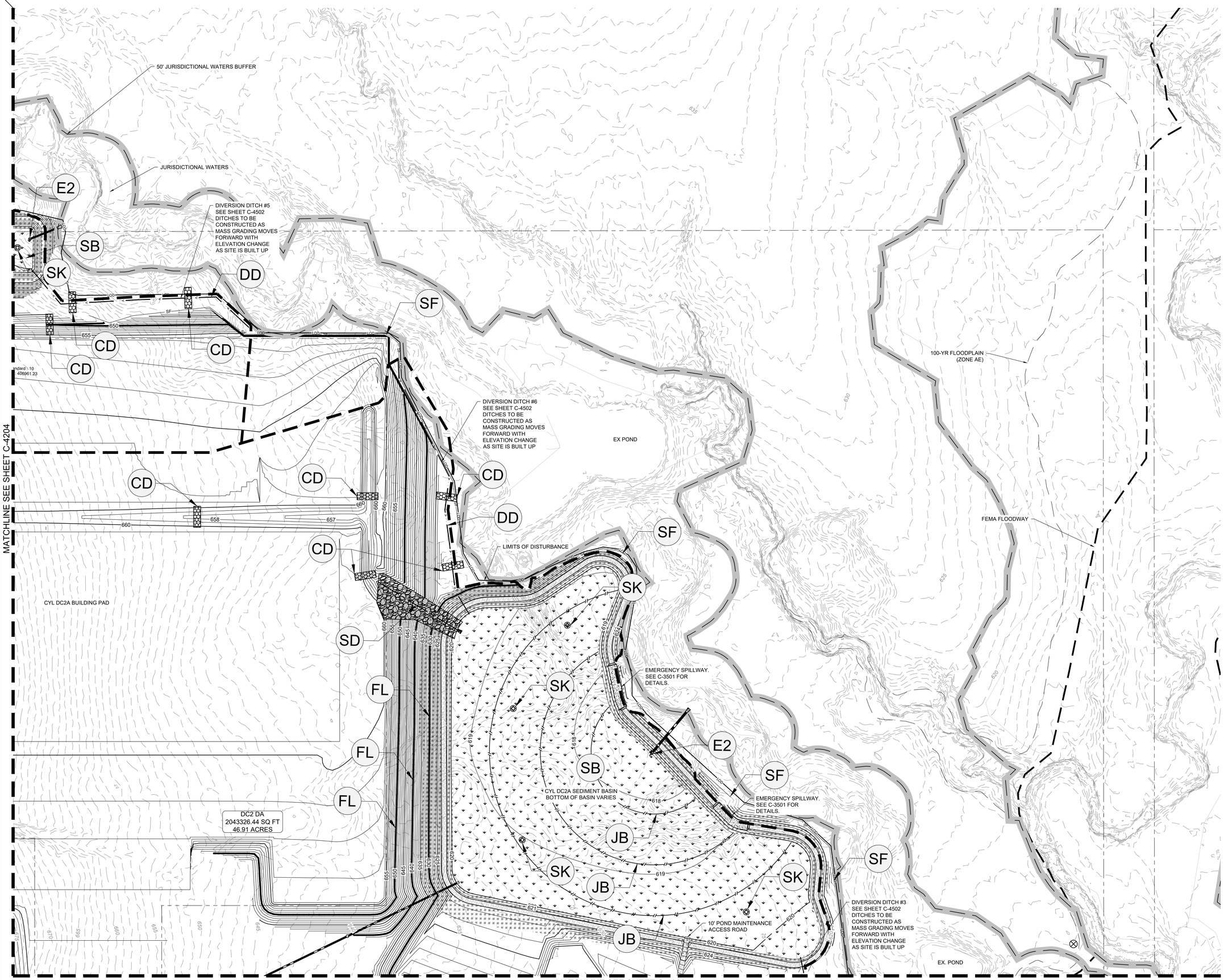
PROJ. NO.: 060007903

EROSION CONTROL PLAN - PHASE 2

SCALE: 1" = 60'

SHEET NUMBER:
C-4204

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



LEGEND

- LOD — LIMITS OF DISTURBANCE
- SF — SILT FENCE
- 200 — EXISTING MAJOR CONTOUR (1' INTERVAL)
- 201 — EXISTING MINOR CONTOUR (1' INTERVAL)
- PROPERTY LINE
- OE — EXISTING OVERHEAD ELECTRIC
- G — EXISTING GAS LINE
- EXISTING EASEMENT
- DRAINAGE AREA BOUNDARY
- DIRECTION OF FLOW
- ROCK CHECK DAMN
- PROPOSED RIP RAP
- PROPOSED GRAVEL ROAD
- EROSION CONTROL BLANKET WITH TEMPORARY SEED MIX (ALL SLOPES 1% OR GREATER)
- PERMANENT STABILIZATION
- CD — ROCK CHECK DAM (SEE DETAIL SHEET C-4500)
- CE — CONSTRUCTION ENTRANCE (SEE DETAIL SHEET C-4500)
- CW — CONCRETE WASHOUT AREA (SEE DETAIL SHEET C-4501)
- DD — DIVERSION DITCH (SEE DETAIL SHEET C-4502)
- EB — EROSION CONTROL BLANKET (SEE DETAIL SHEET C-4500)
- FL — FIBER LOG (SEE DETAIL SHEET C-4501)
- FO — SILT FENCE OUTLET (SEE DETAIL SHEET C-4500)
- FR — STONE FILTER RING (SEE DETAIL SHEET C-4502)
- IP — INLET PROTECTION (SEE DETAIL SHEET C-4501)
- JB — TEMPORARY JUTE NET BAFFLE (SEE DETAIL SHEET C-4502)
- JH — SILT FENCE J-HOOK (SEE DETAIL SHEET C-4502)
- OP — OUTLET PROTECTION (SEE DETAIL SHEET C-4500)
- SB — SEDIMENT BASIN WITH PIPE OUTLET (SEE DETAIL SHEET C-4502)
- SD — TEMPORARY SLOPE DRAIN (SEE DETAIL SHEET C-4501)
- SF — SILT FENCE (SEE DETAIL SHEET C-4500)
- SK — FAIRCLOTH SKIMMER (SEE DETAIL SHEET C-4502)
- WW — WHEEL WASH (SEE DETAIL SHEET C-4500)
- E1 — SEDIMENT BASIN PHASE 1 (SEE DETAIL E1 ON SHEET C-4502)
- E2 — SEDIMENT BASIN PHASE 2 (SEE DETAIL E2 ON SHEET C-4502)

NOTES

1. CONTRACTOR SHALL FOLLOW ALL REQUIREMENTS AND GUIDELINES OF THE EROSION CONTROL NOTES (SHEET C-4000), EROSION CONTROL PLANS (SHEETS C-4100-C-4205), DETAILS (SHEETS C-4500-C-4502), AND SITE SWPPP.
2. CONTRACTOR TO SEE ABBREVIATIONS LIST (SEE SHEET C-0001), FOR CLARIFICATION.
3. FOLLOW CONSTRUCTION SEQUENCING FOR PHASE 1 AND 2 OUTLINED ON SHEET C-4000.

811. Know what's below. Call before you dig.

N

0' 30' 60' 120'
SCALE IN FEET

C:\ACCACDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4201 EROSION CONTROL PLAN - PHASE 2 9/18/2025 12:48 AM

OTHER DISCIPLINES: HDR, Inc. 1917 South 67th Street Omaha, NE 68106 Ph. (402) 399-1000	CIVIL: Kimley-Horn Associates, Inc. 1437 S Boulder Ave, Suite 930 Tulsa, OK 74119 Ph. (918) 380-8868	

CYL1A 95% MASS GRADING
(NOT FOR CONSTRUCTION)
2025-09-17

KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS:
CONFIDENTIAL

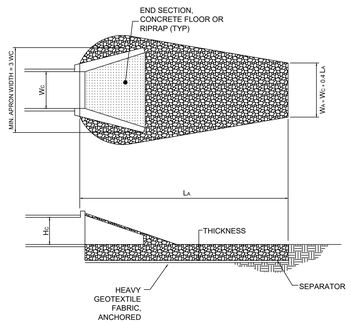
PROJ. NO.: 060007903

EROSION CONTROL PLAN - PHASE 2

SCALE: 1" = 60'

SHEET NUMBER:
C-4205

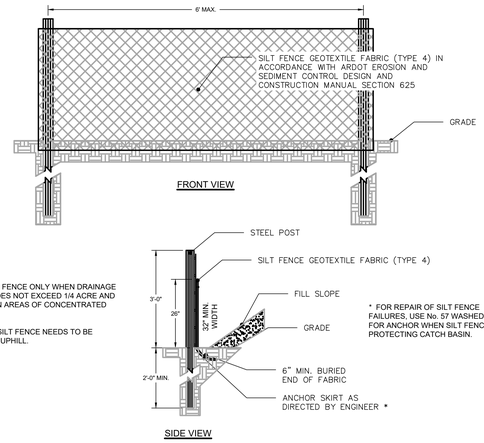
PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT



*REFER TO PLAN SHEETS FOR DIMENSIONS

HC = HEIGHT OF CULVERT
WC = WIDTH OF CULVERT
LA = LENGTH OF RIP-RAP APRON
WA = WIDTH OF RIP-RAP APRON AT END
SEPARATOR = GEOTEXTILE UNDERLAYMENT OR GRAVEL FILTER BLANKET

OP C4500 **OUTLET PROTECTION DETAIL** NTS



NOTES

1. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.
2. END OF SILT FENCE NEEDS TO BE TURNED UPHILL.

* FOR REPAIR OF SILT FENCE FAILURES, USE No. 57 WASHED STONE. FOR ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

SF C4500 **SILT FENCE DETAIL** NTS

PRODUCT PLACEMENT NOTES

THE EROSION CONTROL PRODUCT SHOULD BE PLACED IMMEDIATELY AFTER COMPLETION OF THE PREPARATION OF THE AREA WHERE THE PRODUCT WILL BE PLACED.

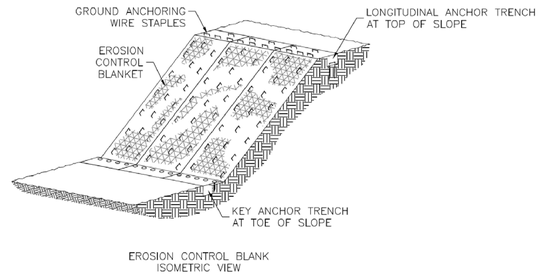
FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION OR USE THE FOLLOWING INSTRUCTIONS. IF THERE IS A CONFLICT, FOLLOW THE MANUFACTURER'S RECOMMENDATIONS. STRIPS SHALL BE ROLLED OUT FLAT, PARALLEL TO THE DIRECTION OF FLOW, IN FLUMES AND DITCHES. ON STEEP CUT OR FILL SLOPES, STRIPS SHALL BE ROLLED OUT FLAT, AND PERPENDICULAR TO THE DIRECTION OF FLOW TO REDUCE RILL EROSION. WHEN 2 OR MORE STRIPS ARE REQUIRED TO COVER AN AREA, THEY SHALL OVERLAP AT LEAST 3" (75 MM); HOWEVER, EXCELSIOR BLANKETS WILL NOT REQUIRE LAPPING BUT ARE TO BE BUTTED TOGETHER AND STAPLED WITH HALF OF EACH STAPLE LOCATED IN EACH OF THE ADJOINING BLANKETS. ENDS OF STRIPS SHALL OVERLAP AT LEAST 6" (150 MM) WITH THE UPGRADE SECTION ON TOP. THE UPSLOPE END (ANCHOR SLOT) OF EACH STRIP SHALL BE BURIED IN 6" (150 MM) VERTICAL SLOTS, AND SOIL TAMPED FIRMLY AGAINST IT. FIGURE ECB-1 SHOWS TYPICAL EROSION CONTROL BLANKET INSTALLATION. WHEN CONDITIONS ARE WARRANTED BY THE OPINION OF THE QUALIFIED DESIGN PROFESSIONAL, ANY OTHER EDGE EXPOSED TO EXCESSIVE FLOW SHALL BE BURIED AS NOTED ABOVE. THE EROSION CONTROL PRODUCT SHALL BE SPREAD EVENLY AND SMOOTHLY, AND SHALL BE IN CONTACT WITH THE SOIL AT ALL POINTS. THE PRODUCT SHOULD NOT BE STRETCHED TIGHT IN SUCH A MANNER THAT THE MATERIAL "TENTS" OVER THE SOIL SURFACE. IF THE MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION OF THE EROSION CONTROL PRODUCT ARE DIFFERENT THAT THOSE GIVEN HERE, THE CONTRACTOR WILL BE REQUIRED TO FOLLOW THE MORE STRINGENT OF THE TWO.

CHECK SLOTS SHALL BE 24" (600 MM) MINIMUM WIDTH AND SEPARATE STRIPS OF EROSION CONTROL PRODUCT PLACED AT RIGHT ANGLES TO THE DIRECTION OF WATER FLOW IMMEDIATELY PRIOR TO PLACING THE GENERAL COVERING OF THE PRODUCT. CHECK SLOTS SHALL BE MADE BY BURYING A TIGHT FOLD OF THE PRODUCT VERTICALLY IN THE SOIL A MINIMUM OF 6" (150 MM) DEEP, AND TAMPING AND STAPLING THE FOLD IN PLACE. CHECK SLOTS SHALL BE PLACED SO THAT ONE CHECK SLOT, JUNCTION SLOT, OR ANCHOR SLOT OF THE EROSION CONTROL PRODUCT OCCURS EVERY 50 FEET (15 M) OF SLOPE. IF THE MANUFACTURER'S RECOMMENDATIONS FOR THE INSTALLATION OF CHECK SLOTS ARE DIFFERENT THAN THOSE GIVEN HERE, THE CONTRACTOR WILL BE REQUIRED TO FOLLOW THE MORE STRINGENT OF THE TWO.

EACH STRIP SHALL BE STAPLED IN 3 ROWS, AT EACH EDGE AND THE CENTER, WITH STAPLES SPACED NOT MORE THAN 3 FEET (900 MM) LONGITUDINALLY. CHECK SLOTS AND ENDS OF STRIPS SHALL BE STAPLED AT 9" (225 MM) INTERVALS ACROSS THEIR WIDTH.

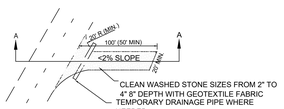
FOR TEMPORARY BLANKETS, STAPLES SHOULD BE U-SHAPED WIRE WITH AN 11-GAUGE THICKNESS OR GREATER. STAPLES SHOULD BE OF SUFFICIENT THICKNESS FOR SOIL PENETRATION WITHOUT UNDUE DISTORTION. THE LEGS OF THE STAPLES SHALL BE AT LEAST 6" LONG WITH A CROWN OF 1". APPROPRIATE BIODEGRADABLE STAPLES CAN BE USED IN LIEU OF WIRE STAPLES.

PERMANENT BLANKETS SHALL BE ANCHORED IN ONE OF TWO WAYS. BLANKETS CAN BE ANCHORED USING SOUND WOOD STAKES, 1" BY 3" STOCK SAWN IN A TRIANGULAR SHAPE. THE LENGTH OF THE STAKES SHALL BE FROM 12" TO 18" DEPENDING UPON THE SOIL COMPACTION AT THE SITE. STAKES SHALL BE INSTALLED ON 4 FEET CENTERS ALONG EACH EDGE OF THE BLANKET. BLANKETS CAN ALSO BE ANCHORED USING U SHAPED STAPLES OF 11 GAUGE STEEL OR GREATER WITH A MINIMUM LEG LENGTH OF 8" AND A 2" CROWN.

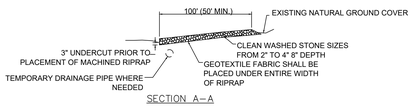


EROSION CONTROL BLANK ISOMETRIC VIEW

EB C4500 **EROSION CONTROL BLANKET DETAIL** NTS

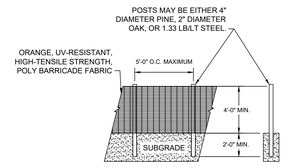


PLAN VIEW OF TEMPORARY CONSTRUCTION ROAD



SECTION A—A

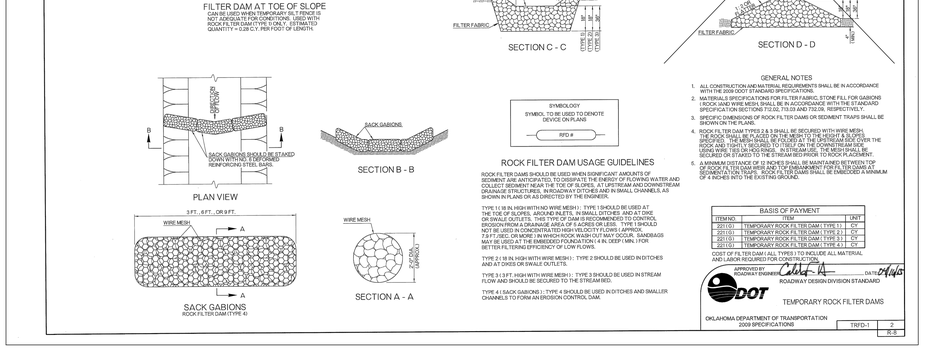
CE C4500 **CONSTRUCTION ENTRANCE DETAIL** NTS



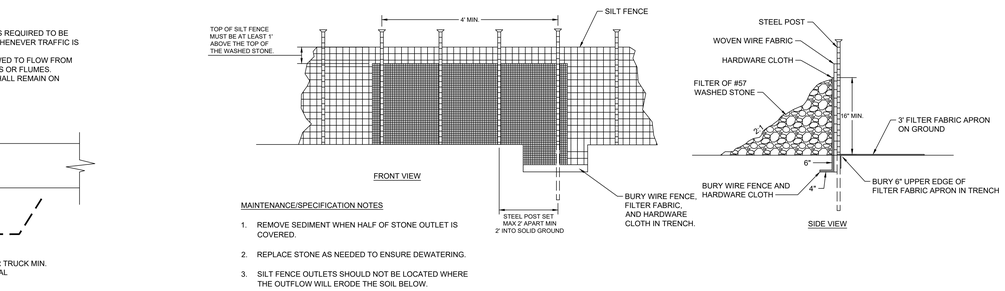
MAINTENANCE SPECIFICATIONS

SHOULD THE FABRIC OF A PROTECTION FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

OF C4500 **ORANGE SAFETY FENCE DETAIL** NTS



CD C4500 **ROCK CHECK DAM DETAIL** NTS



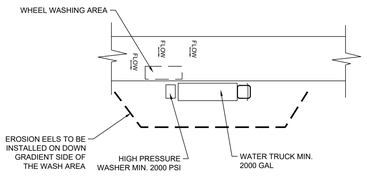
MAINTENANCE/SPECIFICATION NOTES

1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.
3. SILT FENCE OUTLETS SHOULD NOT BE LOCATED WHERE THE OUTFLOW WILL ERODE THE SOIL BELOW.

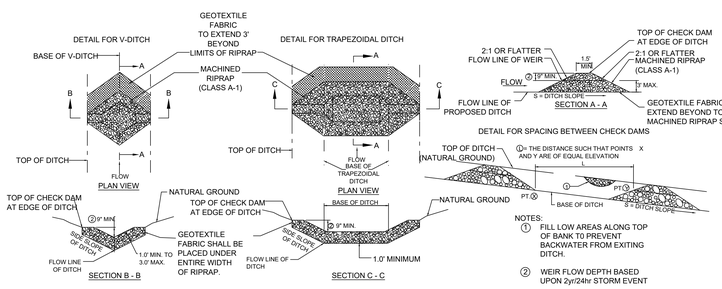
FO C4500 **SILT FENCE OUTLET DETAIL** NTS

NOTES:

1. A FULL TIME INSPECTOR/WHEEL WASHER IS REQUIRED TO BE STATIONED AT THE CONSTRUCTION EXIT WHENEVER TRAFFIC IS ENTERING OR LEAVING THE SITE.
2. NO WHEEL WASH RUNOFF SHALL BE ALLOWED TO FLOW FROM THE SITE, OR TO THE STORM SEWER INLETS OR FLUMES.
3. WATER TRUCK AND PRESSURE WASHER SHALL REMAIN ON PAVED AREAS.



WW C4500 **WHEEL WASH DETAIL** NTS



CD C4500 **ROCK CHECK DAM DETAIL** NTS

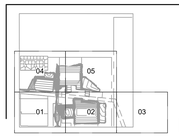
OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
Omaha, NE 68106
Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave, Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS		
NO.	DATE	DESCRIPTION
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT

DRAWN:

APPRV'D:

CYL1A

PROJECT ADDRESS: CONFIDENTIAL

PROJ. NO.: 060007903

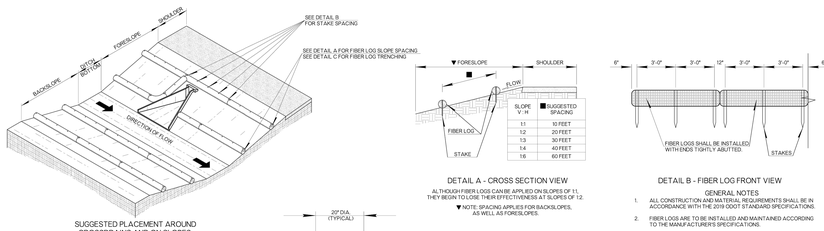
EROSION CONTROL DETAILS

SCALE: N/A

SHEET NUMBER: C-4500

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT

C:\ACC\ACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4500 EROSION CONTROL DETAILS 6/24/2025 2:45 PM



SUGGESTED PLACEMENT AROUND CROSSDRAINS AND ON SLOPES.

SLOPE V : H	■ SUGGESTED SPACING
1:1	10 FEET
1:2	20 FEET
1:3	30 FEET
1:4	40 FEET
1:6	60 FEET

DETAIL A - CROSS SECTION VIEW

ALTHOUGH FIBER LOGS CAN BE APPLIED ON SLOPES OF 1:1, THEY BEGIN TO LOSE THEIR EFFECTIVENESS AT SLOPES OF 1:2.

▼ NOTE: SPACING APPLIES FOR BACKSLOPES, AS WELL AS FORESLOPES.

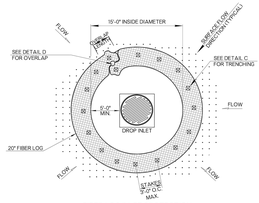
DETAIL B - FIBER LOG FRONT VIEW

GENERAL NOTES

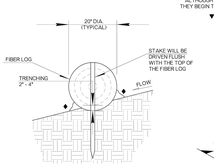
1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 2019 ODOT STANDARD SPECIFICATIONS.
2. FIBER LOGS ARE TO BE INSTALLED AND MAINTAINED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.
3. CONFIGURATIONS MAY BE ADJUSTED WITH APPROVAL OF THE ENGINEER FOR TRAVELWAY SAFETY, WATER FLOW, SOIL OR INSTALLATION CHALLENGES.
4. TRENCHING OF LOGS SHALL BE 3 TO 4 INCHES INTO SOIL. BEFORE TRENCHING, REMOVE ALL ROCKS, VEGETATION OR OTHER OBSTRUCTIONS SO THAT THE INSTALLED LOGS WILL HAVE DIRECT CONTACT WITH SOIL. THERE SHALL NOT BE ANY GAPS BETWEEN THE LOGS AND THE SOIL.
5. STAKES DRIVEN INTO LOGS SHOULD BE MADE OF WOOD. METAL STAKES MAY BE USED IN PLACE OF WOOD STAKES IN AREAS WHERE WOOD STAKES ARE UNABLE TO BE DRIVEN, OR IF APPROVED BY THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT. WOOD STAKES SHALL BE 3/4 INCHES BY 3/4 INCHES, MINIMUM. LENGTH OF STAKES SHALL BE TWICE THE DIAMETER OF THE LOG.
6. THE FILLING INSIDE THE LOGS MAY BE MADE OF STRAW, EXCELSIOR, COIR OR OTHER SIMILAR MATERIAL AS APPROVED BY THE ENGINEER. FIBER NET SURROUNDING THE LOG MAY BE SYNTHETIC MATERIAL OR A NATURAL FIBER.
7. OVERLAP ENDS OF FIBER LOG SO THAT ONE END IS IMMEDIATELY UPSTREAM OF THE OTHER AND TOUCHING EACH OTHER. OVERLAP DISTANCE SHALL BE IS TO 24 INCHES OR PER MANUFACTURER'S RECOMMENDATION.
8. MAINTENANCE SHALL INCLUDE THE REMOVAL OF SEDIMENT WHEN HALF OF THE HEIGHT OF THE FIBER LOG HAS BEEN FILLED OR AS DIRECTED BY THE ENGINEER.
9. COST OF TEMPORARY FIBER LOG SHALL INCLUDE ALL MATERIALS AND LABOR NECESSARY FOR THE INSTALLATION AND MAINTENANCE.

BASIS OF PAYMENT

ITEM NO.	ITEM	UNIT
221(0)	TEMPORARY FIBER LOG	LF

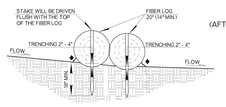


FIBER LOG INLET PROTECTION PLAN VIEW



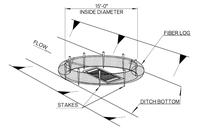
DETAIL C - TRENCHING

♦ ARE AS TO BE FILLED WITH COMPACTED SOIL TAKEN FROM THE EXCAVATED TRENCH.



DETAIL D - OVERLAP

♦ AREAS TO BE FILLED WITH COMPACTED SOIL TAKEN FROM THE EXCAVATED TRENCH.



FIBER LOG INLET PROTECTION (AFTER INLET IS CONSTRUCTED AND BACKFILLED)

SYMBOLOGY

SYMBOL TO BE USED TO DENOTE DEVICE ON PLANS

FIBER LOG INLET PROTECTION — IP1

TEMPORARY FIBER LOG TO BE USED ON SLOPES

APPROVED BY ROADWAY ENGINEER: RWE DATE: 6/24/25

ROADWAY DESIGN DIVISION STANDARD

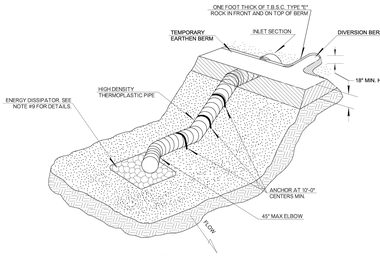
TEMPORARY FIBER LOG APPLICATIONS

OKLAHOMA Transportation

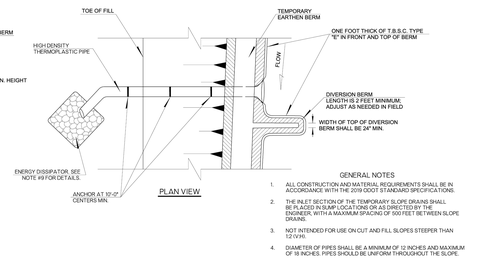
2019 SPECIFICATIONS

TFL	0
	R-8

FL C4501 FIBER LOG DETAIL NTS



PERSPECTIVE VIEW



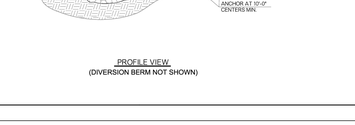
PLAN VIEW

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 2019 ODOT STANDARD SPECIFICATIONS.
2. THE INLET SECTION OF THE TEMPORARY SLOPE DRAINS SHALL BE PLACED IN SUMP LOCATIONS OR AS DIRECTED BY THE ENGINEER, WITH A MAXIMUM SPACING OF 500 FEET BETWEEN SLOPE DRAINS.
3. NOT INTENDED FOR USE ON CUT AND FILL SLOPES STEEPER THAN 1:2 (V:H).
4. DIAMETER OF PIPES SHALL BE A MINIMUM OF 12 INCHES AND MAXIMUM OF 18 INCHES. PIPES SHOULD BE UNIFORM THROUGHOUT THE SLOPE.
5. ENTRANCE SECTION MUST BE SECURELY ENTRENCHED AND ALL CONNECTIONS WATERTIGHT.
6. THE CONDUIT SHOULD BE SECURELY STAKED TO THE SLOPE.
7. INLET PIPE SHOULD HAVE A MINIMUM SLOPE OF 2%.
8. SLOPE DRAIN SHOULD EXTEND A MINIMUM OF 4 FEET PAST THE TOE OF SLOPE AND OUTLET SHOULD HAVE LESS THAN 1% SLOPE.
9. ENERGY DISSIPATOR SHALL BE 5 FT. X 5 FT. X 1 FT. OR AS DIRECTED BY THE ENGINEER. STONE FOR ENERGY DISSIPATOR SHALL BE RIPRAP STONE OR MATERIAL MADE OF CRUSHED NON-EROSIVE ROCK THAT IS FREE OF ALL FINES, CLAYS AND SILTS AND OF SUFFICIENT SIZE TO PREVENT DOWNSTREAM MOVEMENT.
10. THE SOIL AROUND AND UNDER THE INLET PIPE AND ENTRANCE SECTION SHALL BE HAND TAMPED IN 4 INCH LIFTS TO THE TOP OF THE TEMPORARY EARTHEN BERM.
11. DIVERSION BERMS, INSTALLED PERPENDICULAR TO THE LONGITUDINAL DIRECTION OF THE HIGHWAY, MAY BE MADE OF SOIL, SAND BAGS, OR SILT SAC. SIDE SLOPES OF THE DIVERSION BERM SHALL BE 2H:1V OR FLATTER.
12. PROS BID FOR TEMPORARY SLOPE DRAIN SHALL INCLUDE COST OF ALL MATERIALS AND LABOR NECESSARY FOR CONSTRUCTION, MAINTENANCE AND REMOVAL.
13. IF DIVERSION BERMS ARE LEFT IN PLACE LONGER THAN 14 CALENDAR DAYS, THEY SHALL BE STABILIZED TO PREVENT SEDIMENT RUNOFF.

BASIS OF PAYMENT

ITEM NO.	ITEM	UNIT
221(A)	TEMPORARY SLOPE DRAIN	LF



PROFILE VIEW
(DIVERSION BERM NOT SHOWN)

SYMBOLOGY

SYMBOL TO BE USED TO DENOTE DEVICE ON PLANS

TSD

APPROVED BY ROADWAY ENGINEER: RWE DATE: 6/24/25

ROADWAY DESIGN DIVISION STANDARD

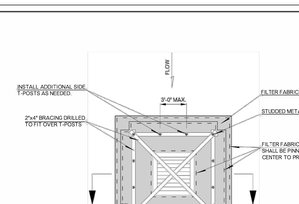
TEMPORARY SLOPE DRAIN

OKLAHOMA Transportation

2019 SPECIFICATIONS

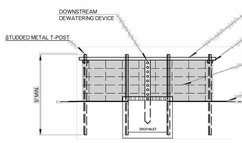
SD	0
	R-12

SD C4501 TEMPORARY SLOPE DRAIN DETAIL NTS

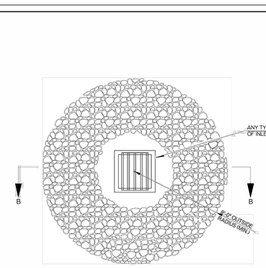


REINFORCED SILT FENCE INLET PROTECTION
MAX. Q = 5 TO 7 CFS
MAX. DRAIN AREA = 2 ACRES

PLAN VIEW

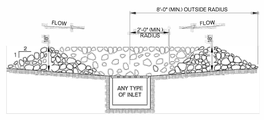


SECTION A-A



AGGREGATE INLET PROTECTION
MAX. Q = 3 TO 5 CFS
MAX. DRAIN AREA = 1 ACRE

PLAN VIEW



SECTION B-B

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 2019 ODOT STANDARD SPECIFICATIONS.
2. CONFIGURATIONS MAY BE ADJUSTED WITH APPROVAL OF THE ENGINEER FOR TRAVELWAY SAFETY, WATER FLOW, SOIL OR INSTALLATION CHALLENGES.

   REINFORCED SILT FENCE MAY BE REQUIRED UPSLOPE OF THE INLET EXCAVATION AS DIRECTED BY THE ENGINEER.
4. IF REINFORCED SILT FENCE IS INSTALLED AROUND THE INLET EXCAVATION IT SHOULD BE PLACED IN A CONFIGURATION THAT WILL ALLOW INLET CONSTRUCTION.
5. DEWATERING HOLES IN THE DEWATERING DEVICE SHALL BE 1 TO 1 1/2 INCHES IN DIAMETER AND SPACED 2 TO 3 INCHES APART TO ALLOW FOR DEWATERING. IF MORE THAN 48 HOURS IF THIS DOESN'T FUNCTION PROPERLY, ANOTHER DEVICE CAN BE ADDED AT THE DIRECTION OF THE ENGINEER.
6. FASTEN DEWATERING DEVICE TO THE 2 INCHES BY 4 INCHES SIDE BRACE.
7. STAPLE FILTER FABRIC TO DEWATERING DEVICE AND CUT ACROSS SLITS IN THE FILTER FABRIC AT THE HOLE LOCATIONS TO ALLOW WATER TO FLOW THROUGH. PROVIDE FILTER FABRIC IN ACCORDANCE WITH AASHTO M 288 SPECIFICATION.
8. PRICE BID FOR THE REINFORCED SILT FENCE INLET PROTECTION WILL INCLUDE FILTER FABRIC, POSTS, WIRE MESH, WOOD BRACING, DEWATERING DEVICE AND ALL INCIDENTALS REQUIRED TO COMPLETE ITS INSTALLATION. THIS INLET PROTECTION DEVICE SHALL BE PAID FOR AS TEMPORARY INLET SEDIMENT FILTER, WITH UNITS OF EACH.

   ROCK GRADATION FOR THE AGGREGATE INLET PROTECTION ITEMTEMPORARY SEDIMENT FILTERS SHALL BE AS FOLLOWS:

PERCENT PASSING	SIEVE SIZE
100	4 INCH
90-100	3.5 INCH
25-40	2.5 INCH
0-15	1.5 INCH
0-5	3/4 INCH

10. COST FOR ALL MATERIALS, LABOR AND MAINTENANCE OF THE AGGREGATE INLET PROTECTION SHALL BE PAID FOR AS TEMPORARY INLET SEDIMENT FILTER, WITH UNITS OF EACH.
11. INLET PROTECTION DEVICES SHALL BE LEFT IN PLACE UNTIL THE DRAINAGE AREA IS PERMANENTLY STABILIZED WITH ESTABLISHED VEGETATION OR PAVEMENT.

BASIS OF PAYMENT

ITEM NO.	ITEM	UNIT
221(I)	SPL(TEMPORARY INLET SEDIMENT FILTER	EA

SYMBOLOGY

SYMBOL TO BE USED TO DENOTE DEVICE ON PLANS

AGGREGATE INLET PROTECTION — IP2

REINFORCED SILT FENCE INLET PROTECTION — IP3

APPROVED BY ROADWAY ENGINEER: RWE DATE: 6/24/25

ROADWAY DESIGN DIVISION STANDARD

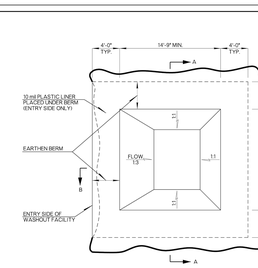
INLET PROTECTION
(AGGREGATE AND REINFORCED SILT FENCE APPLICATIONS)

OKLAHOMA Transportation

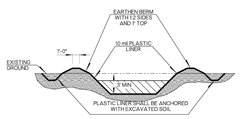
2019 SPECIFICATIONS

IPD	0
	R-5

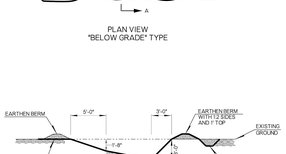
IP C4501 INLET PROTECTION DETAIL NTS



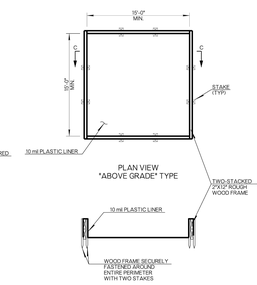
PLAN VIEW
"BELOW GRADE" TYPE



SECTION A-A



SECTION B-B



PLAN VIEW
"ABOVE GRADE" TYPE

SECTION C-C

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE 2019 ODOT STANDARD SPECIFICATIONS.
2. TEMPORARY CONCRETE WASHOUT DEVICES SHOULD BE CONSTRUCTED ABOVE GRADE OR BELOW GRADE AT THE OPTION OF THE CONTRACTOR. WASHOUT DEVICE SHOULD BE CONSTRUCTED AND MAINTAINED IN SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.
3. PROVIDE A WASHOUT AREA A MINIMUM OF 50 FEET AWAY FROM INLETS, SWALES, DRAINAGE WAYS AND CHANNELS. IF THE SITE CONFIGURATION PROVIDES SUFFICIENT SPACE TO DO SO. IN NO CASE SHALL THE CONCRETE WASHOUT DEVICE BE INSTALLED CLOSER THAN 20 FEET FROM INLETS, SWALES, DRAINAGE WAYS AND CHANNELS.
4. PLASTIC LINER SHALL CONFORM TO ASTM D-4397, BE A MINIMUM OF 10 MIL (0.10 INCHES) THICK, AND FREE OF ALL TEARS AND HOLES AND BE IMPERMEABLE.
5. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE LOCATION OF THE CONCRETE WASHOUT DEVICE, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE FACILITY TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
6. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.
7. THE CONCRETE WASHOUT DEVICE SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE, AND SHOULD REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
8. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED, ALONG WITH THE PLASTIC LINER, ONCE THE PIT HAS REACHED 50% CAPACITY, USING SUITABLE WATER TIGHT CONTAINERS AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS OR IN A MANNER APPROVED BY THE RESIDENT ENGINEER.
9. ALL MATERIALS, LABOR AND SIGNS NEEDED TO CONSTRUCT AND MAINTAIN THE CONCRETE WASHOUT DEVICE SHALL BE INCLUDED IN OTHER ITEMS OF WORK.
10. ALTERNATE DESIGNS OF THE CONCRETE WASHOUT DEVICE MAY BE USED IF APPROVED BY THE ENGINEER.

APPROVED BY ROADWAY ENGINEER: RWE DATE: 6/24/25

ROADWAY DESIGN DIVISION STANDARD

CONCRETE WASHOUT APPLICATIONS

OKLAHOMA Transportation

2019 SPECIFICATIONS

CWA	0
	R-13

CW C4501 CONCRETE WASHOUT AREA DETAIL NTS

C:\ACC\ACCDocs\Kimley-Horn\060057900_CYL\Project Files\00_Civil\Mass Grading\03_Production-DWGS\CYL-1A-C-4500 EROSION CONTROL DETAILS 6/24/2025 2:45 PM

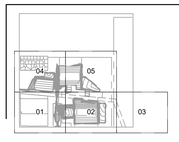
OTHER DISCIPLINES:

HDR, Inc.
1917 South 67th Street
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Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
1437 S Boulder Ave, Suite 930
Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS			DRAWN:
NO.	DATE	DESCRIPTION	
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT	
			APPRV'D:

CYL1A

PROJECT ADDRESS: CONFIDENTIAL

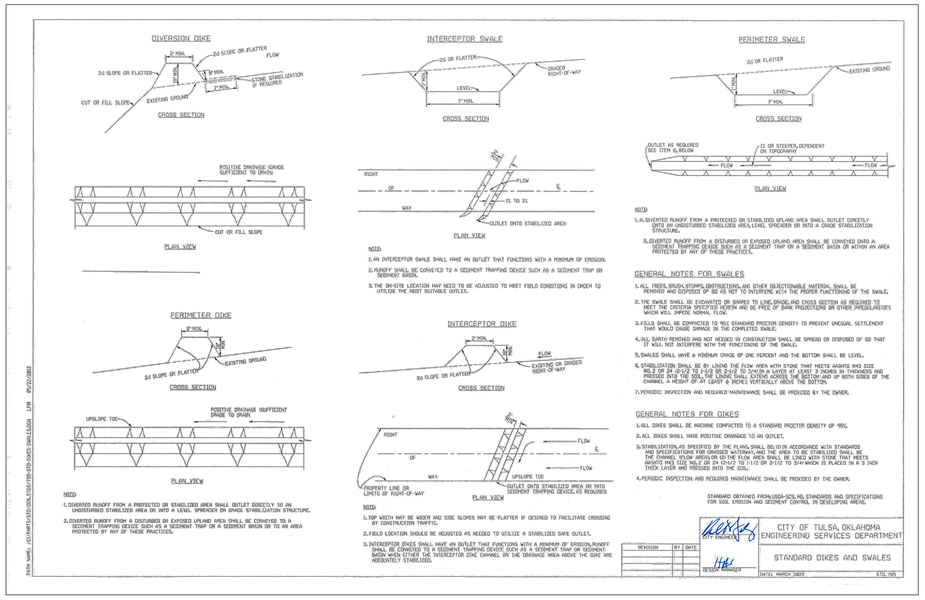
PROJ. NO.: 060007903

EROSION CONTROL DETAILS

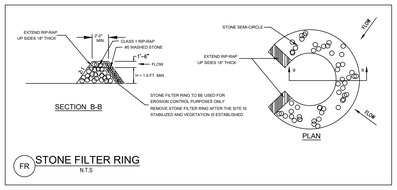
SCALE: N/A

SHEET NUMBER: C-4501

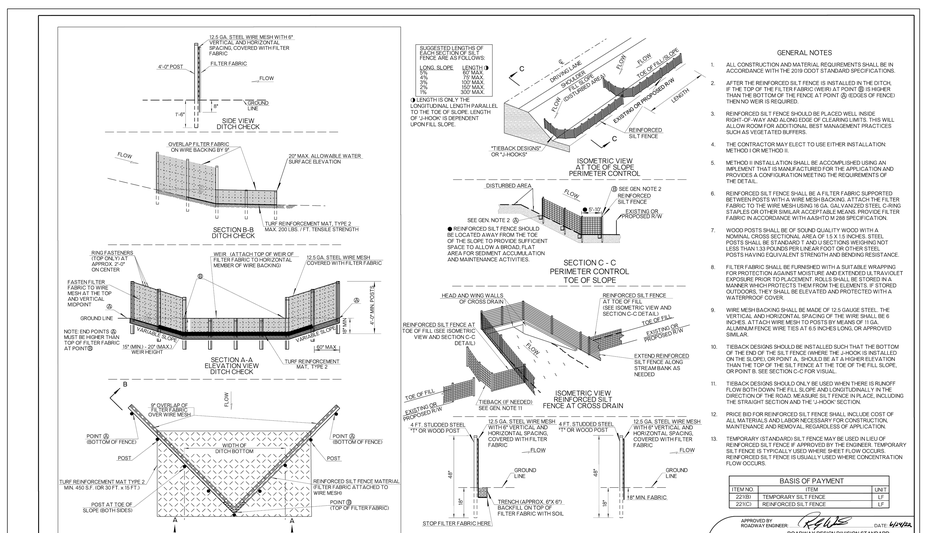
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PHASE: 95% MG ISSUE FOR PERMIT



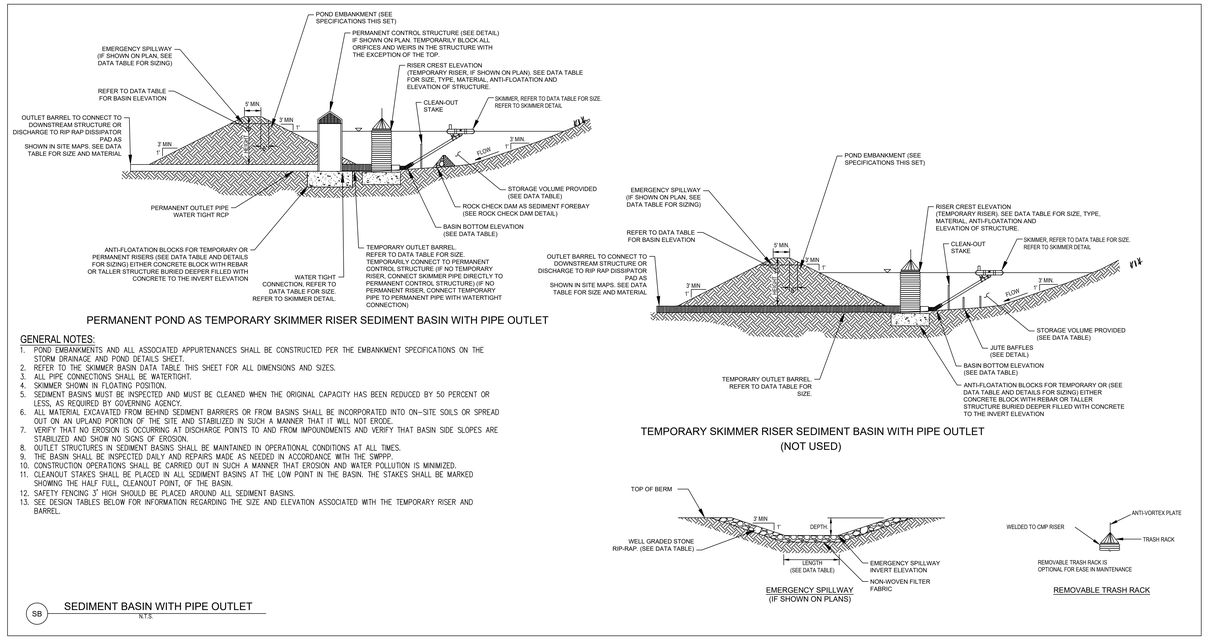
DD (C4502) DIVERSION DITCH DETAIL NTS



FR STONE FILTER RING N.T.S



JH (C4502) REINFORCED J-HOOK SILT FENCE DETAIL NTS



PERMANENT POND AS TEMPORARY SKIMMER RISER SEDIMENT BASIN WITH PIPE OUTLET

GENERAL NOTES:
1. POND EMBANKMENTS AND ALL ASSOCIATED APPURTENANCES SHALL BE CONSTRUCTED PER THE EMBANKMENT SPECIFICATIONS ON THE STORM DRAINAGE AND POND DETAILS SHEET.
2. REFER TO THE SKIMMER BASIN DATA TABLE THIS SHEET FOR ALL DIMENSIONS AND SIZES.
3. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.
4. SKIMMER SHOWN IN FLOATING POSITION.
5. SEDIMENT BASINS MUST BE INSPECTED AND MUST BE CLEANED WHEN THE ORIGINAL CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR LESS, AS REQUIRED BY GOVERNING AGENCY.
6. ALL MATERIAL EXCAVATED FROM BEHIND SEDIMENT BARRIERS OR FROM BASINS SHALL BE INCORPORATED INTO ON-SITE SOILS OR SPREAD OUT ON AN UPLAND PORTION OF THE SITE AND STABILIZED IN SUCH A MANNER THAT IT WILL NOT ERODE.
7. VERIFY THAT NO EROSION IS OCCURRING AT DISCHARGE POINTS TO AND FROM IMPOUNDMENTS AND VERIFY THAT BASIN SIDE SLOPES ARE STABILIZED AND SHOW NO SIGNS OF EROSION.
8. OUTLET STRUCTURES IN SEDIMENT BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES.
9. THE BASIN SHALL BE INSPECTED DAILY AND REPAIRS MADE AS NEEDED IN ACCORDANCE WITH THE SWPPP.
10. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
11. CLEANOUT STAKES SHALL BE PLACED IN ALL SEDIMENT BASINS AT THE LOW POINT IN THE BASIN. THE STAKES SHALL BE MARKED SHOWING THE HALF FULL, CLEANOUT POINT, OF THE BASIN.
12. SAFETY FENCING 3' HIGH SHOULD BE PLACED AROUND ALL SEDIMENT BASINS.
13. SEE DESIGN TABLES BELOW FOR INFORMATION REGARDING THE SIZE AND ELEVATION ASSOCIATED WITH THE TEMPORARY RISER AND BARREL.

TEMPORARY SKIMMER RISER SEDIMENT BASIN WITH PIPE OUTLET
(NOT USED)

SB (C4502) SEDIMENT BASIN WITH PIPE OUTLET N.T.S

TEMPORARY SEDIMENT BASIN DESIGN TABLE

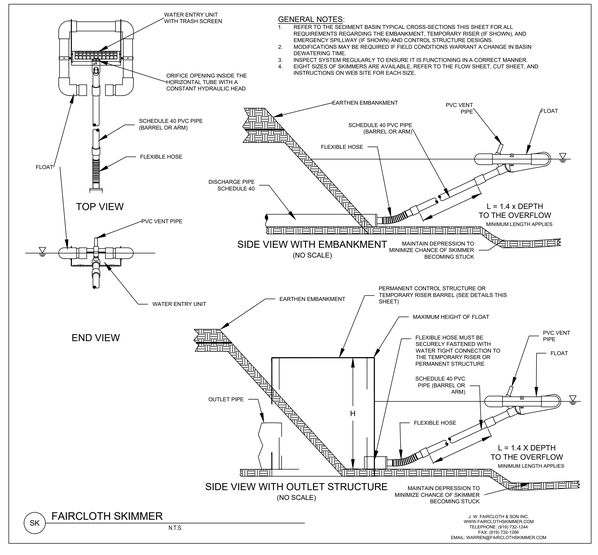
Item	Sediment Basin Pond HUB	Sediment Basin Pond PSO	Sediment Basin Temp 1	Sediment Basin Pond DC1	Sediment Basin Pond DC2
Disturbed Area (ac)	11.91	18.04	9.17	59.82	50.88
Drainage Area (ac)	11.91	29.60	9.17	59.82	50.88
Required Storage (cf) (2 yr, 24-hr storm)	120,426	182,483	92,759	605,109	514,676
Minimum Required Storage (cf) (3600 cf/ac)	42,858	64,944	33,012	215,352	183,168
Bottom of Basin Elevation	632.80	653.00	638.33	611.30	617.05
Principle Spillway - Riser	637.50	655.80	643.00	615.30	620.10
Principle Spillway - Weir	640.50	658.10	--	616.10	621.60
Top of Basin Elevation	642.80	659.00	645.00	617.05	622.60
Designed Storage Elevation (ft)	637.5	655.8	643.0	615.3	620.1
Designed Storage Volume (cf)	343,571.3	79,507.2	60,188.3	505,117.1	378,538.9
Riser Barrel Q (cfs)	46.6	57.7	31.8	50.3	64.2
Riser Barrels	1.0	1.0	1.0	1.0	1.0
Riser Size (in)	48.0	48.0	36.0	48.0	48.0
Oulet Pipe Size (in)	30.0	36.0	30.0	36.0	36.0
Outlet Pipe Length (ft)	1220.0	66.6	58.0	101.8	104.5
Slope of Barrel (%)	0.50	2.00	2.29	1.00	0.50
Antifloatation Diameter (ft)	48.0	48.0	36.0	48.0	48.0
Height Under Ground (ft)	5.00	5.00	5.50	6.00	4.50
Weight of Anchor (lb)	5,501	5,501	3,404	6,602	4,951
$Q_{spillway}$ (cfs)	46.60	57.65	31.80	201.12	149.80
Spillway Length (ft)	50.00	12.50	10.00	120.00	16.00
Spillway Crest Elevation (ft)	641.80	655.80	643.00	616.10	620.10
Size of Skimmer (in)	6"	6"	5"	6"	6"
Number of Skimmers Req'd	4	1	1	5	4
Size of Skimmer Orifice (in)	5.50	2.70	2.50	6.70	5.80

E1 (C4502) SEDIMENT BASIN PHASE 1 DETAIL

TEMPORARY SEDIMENT BASIN DESIGN TABLE

Item	Sediment Basin Pond HUB	Sediment Basin Pond PSO	Sediment Basin Temp 1	Sediment Basin Pond DC1	Sediment Basin Pond DC2
Disturbed Area (ac)	41.40	22.41	9.34	34.72	46.78
Drainage Area (ac)	43.40	36.26	9.34	34.72	46.78
Required Storage (cf) (2 yr, 24-hr storm)	418,781	226,688	94,479	351,210	473,203
Minimum Required Storage (cf) (3600 cf/ac)	149,040	80,676	33,824	124,992	168,408
Bottom of Basin Elevation	632.80	653.00	638.33	611.30	617.05
Principle Spillway - Riser	637.50	655.80	643.00	615.30	620.10
Principle Spillway - Weir	640.50	658.10	--	616.10	621.60
Top of Basin Elevation	642.80	659.00	645.00	617.05	622.60
Designed Storage Elevation (ft)	637.5	655.8	643.0	615.3	620.1
Designed Storage Volume (cf)	343,571.3	79,507.2	60,188.3	505,117.1	378,538.9
Riser Barrel Q (cfs)	55.6	69.9	31.8	29.4	59.4
Riser Barrels	3.0	1.0	1.0	1.0	1.0
Riser Size (in)	48.0	48.0	36.0	48.0	48.0
Oulet Pipe Size (in)	36.0	36.0	30.0	30.0	36.0
Outlet Pipe Length (ft)	1220.0	66.6	58.0	101.8	104.5
Slope of Barrel (%)	0.50	2.00	2.29	1.00	0.50
Antifloatation Diameter (ft)	48.0	48.0	36.0	48.0	48.0
Height Under Ground (ft)	5.00	5.00	5.50	6.00	4.50
Weight of Anchor (lb)	5,501	5,501	3,404	6,602	4,951
$Q_{spillway}$ (cfs)	111.13	69.90	31.80	117.68	138.53
Spillway Length (ft)	50.00	14.00	10.00	120.00	16.00
Spillway Crest Elevation (ft)	641.80	655.80	643.00	616.10	620.10
Size of Skimmer (in)	6"	6"	5"	6"	6"
Number of Skimmers Req'd	4	1	1	5	4
Size of Skimmer Orifice (in)	5.50	2.70	2.50	6.70	5.80

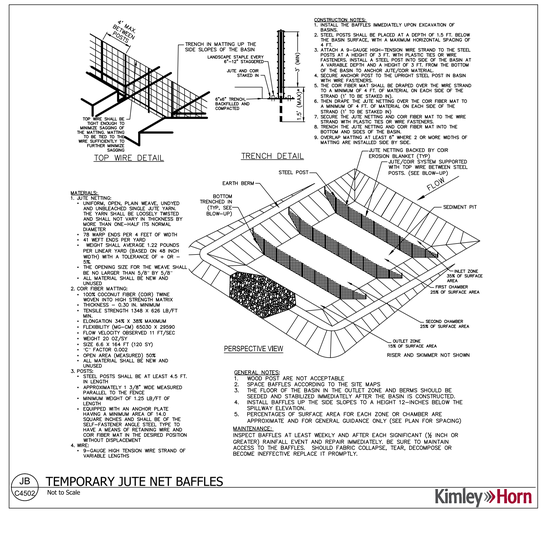
E2 (C4502) SEDIMENT BASIN PHASE 2 DETAIL



GENERAL NOTES:
1. REFER TO THE SEDIMENT BASIN TYPICAL CROSS-SECTIONS THIS SHEET FOR ALL REQUIREMENTS REGARDING THE EMBANKMENT, TEMPORARY RISER (IF SHOWN), AND EMERGENCY SPILLWAY (IF SHOWN) AND CONTROL STRUCTURE DESIGNS.
2. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE IN BASIN DEWATERING TIME.
3. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
4. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.

SK FAIRCLOTH SKIMMER N.T.S.

J. W. FAIRCLOTH & SON INC.
WWW.FAIRCLOTHSKIMMER.COM
POST OFFICE BOX 249
FAX: (910) 762-1264
EMAIL: WARREN@FAIRCLOTHSKIMMER.COM



JB (C4502) TEMPORARY JUTE NET BAFFLES Not to Scale

Kimley»Horn

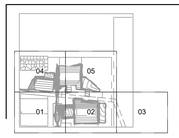
OTHER DISCIPLINES:

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Ph. (402) 399-1000

CIVIL:

Kimley-Horn Associates, Inc.
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Tulsa, OK 74119
Ph. (918) 380-8868

CYL1A 95% MASS GRADING (NOT FOR CONSTRUCTION) 2025-09-17



KEYPLAN

REVISIONS			DRAWN:
NO.	DATE	DESCRIPTION	
1	2025/09/17	MG 95% R1 ISSUED FOR PERMIT	
			APPR'V'D:

CYL1A

PROJECT ADDRESS: CONFIDENTIAL

PROJ. NO.: 060007903

EROSION CONTROL DETAILS

SCALE: N/A

SHEET NUMBER: C-4502

PAPER SIZE: E (36"x48")
PHASE: 95% MG ISSUE FOR PERMIT

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