CIVIL/SITE DESIGN PLANS FOR:
Hillview Veterinary Clinic, LLC
1761 Thornburg Lane
Franklin, Indiana

FLOOD ZONE NOTE:

The accuracy of any flood hazard data shown on this survey is subject to map scale uncertainty and to any other uncertainty in location or elevation on the referenced Flood Insurance Rate Map. The property described on this Survey is located in Zone X (areas of minimal flooding) and IS NOT located in Zone A (Areas of 100 year flood) as said tract plots by scale on Community Panel No. 18081 C 0232 D of the Flood Insurance Rate Maps for City of Franklin, Johnson County, Indiana dated 08.02.2007.

BENCHMARKS:

FRANKLIN 1920 NO 1 1974 = 730.55 (NAVD 1988)
REFERENCE MARK 1 IS A STANDARD DISK STAMPED FRANKLIN 1920 NO 1 1974 SET IN A DRILL HOLE IN THE TOP AND SOUTHWEST CORNER OF THE CONCRETE BASE OF RAILROAD CROSSING LIGHT , 24 FEET NORTH OF THE CENTERLINE OF MADISON STREET AND 16 FEET EAST OF THE EAST RAIL OF THE RAILROAD BETWEEN CROWELL AND DEPOT STREETS.

TBM#1 = 735.24
REBAR WITH YELLOW PLASTIC CAP MARKED FECO FOUND 4 INCHES DOWN AT THE NORTHWEST CORNER OF LOT 5.

TBM#2 = 734.64
MAG NAIL DOUND AT THE NORTH EDGE OF THE SIDEWALK AT THE SOUTHWEST CORNER OF LOT 5.

STORMWATER POLLUTION PREVENTION PLAN INDEX

A	CONSTRUCTION PLAN ELEMENTS	LOCATION
1	INDEX	C0.0
2	11"x17" PLAT / LAYOUT	PROVIDED SEPARATELY
3	PROJECT NARRATIVE	C4.2
4	VICINITY MAP	C0.0
5	LEGAL DESCRIPTION OF PROJECT SITE – INCLUDING LATITUDE AND LONGITUDE	C4.2
6	LOCATION OF ALL LOTS AND PROPOSED SITE IMPROVEMENTS	C2.0
7	HYDROLOGIC UNIT CODE (14 DIGIT)	C4.2
8	NOTATION OF ANY STATE OR FEDERAL WATER QUALITY PERMITS	C4.2
9	LOCATIONS OF STORMWATER DISCHARGE POINTS FROM SITE	C1.0
10	NAMES AND LOCATIONS OF WETLANDS, LAKES AND WATER COURSES	C4.2
11	IDENTIFICATION OF ALL RECEIVING WATERS	C4.2
12	IDENTIFICATION OF POTENTIAL DISCHARGES TO GROUNDWATER	C4.2
13	100 YEAR FLOODPLAINS, FLOODWAYS AND FLOODWAY FRINGES	C4.2
14	ESTIMATES OF PRE AND POST CONSTRUCTION PEAK DISCHARGES	C4.2
15	ADJACENT LAND USE, INCLUDING UPSTREAM WATERSHED	C4.2
16	LOCATIONS AND BOUNDARIES OF ALL DISTURBED AREAS (CONSTRUCTION LIMITS)	C4.0
17	INDENTIFICATION OF EXISTING VEGETATIVE COVER	C1.0
18	SOILS MAP INCLUDING SOIL DESCRIPTIONS AND LIMITATIONS	C4.2
19	LOCATIONS, SIZES AND DIMENSIONS OF PROPOSED STORMWATER SYSTEMS	N/A
20	PLANS FOR ANY OFF-SITE CONSTRUCTION ACTIVITIES	N/A
21	LOCATIONS OF PROPOSED SOIL STOCKPILES AND/OR BORROW/DISPOSAL AREAS	C4.0
22	EXISTING SITE TOPOGRAPHY AND DRAINAGE PATTERNS	C1.0
23	PROPOSED FINAL TOPOGRAPHY AND DRAINAGE PATTERNS	C2.0

B	STORMWATER POLLUTION PREVENTION PLAN – CONSTRUCTION COMPONENT	LOCATION
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2	SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION	C4.2
3	CONSTRUCTION ENTRANCE LOCATIONS AND SPECIFICATIONS	C4.2
4	SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS	C4.2
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6	STORMWATER INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS	C4.2
7	RUNOFF CONTROL MEASURES	C4.2
8	STORMWATER OUTLET PROTECTION SPECIFICATIONS	C4.2
9	GRADE STABILIZATION STRUCTURE LOCATIONS AND SPECIFICATIONS	C4.2
10	LOCATION, DIMENSIONS, SPECIFICATIONS AND DETAILS OF EACH MEASURE	C4.2
11	TEMPORARY SURFACE STABILIZATION METHODS APPROPRIATE FOR EACH SEASON	C4.2
12	PERMANENT SURFACE STABILIZATION SPECIFICATIONS	C4.2
13	MATERIAL HANDLING AND SPILL PREVENTION PLAN	C4.2
14	MONITORING AND MAINTENANCE GUIDELINES FOR EACH PROPOSED MEASURE	C4.2
15	EROSION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS	N/A

C	STORMWATER POLLUTION PREVENTION PLAN – POST CONSTRUCTION COMPONENT	LOCATION
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2	SEQUENCE DESCRIBING STORMWATER QUALITY MEASURE IMPLEMENTATION	C4.2
3	DESCRIPTION OF PROPOSED POST CONSTRUCTION STORMWATER QUALITY MEASURES	C4.2
4	LOCATION, DIMENSIONS, SPECIFICATIONS AND DETAILS OF EACH MEASURE	C4.2
5	DESCRIPTION OF MAINTENANCE GUIDELINES FOR POST CONSTRUCTION MEASURES	C4.2

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Lot Numbered 5 in Jefferson Estates Commercial Park, an addition to the City of Franklin as recorded as Instrument 2000-003527 in the Office of the Recorder of Johnson County, Indiana.

CONSTRUCTION PLAN INDEX

SHEET	DESCRIPTION
C0.0	TITLE SHEET
C1.0	TOPOGRAPHIC SURVEY
C1.1	DEMOLITION PLAN
C2.0	SITE PLAN
C3.0	GRADING PLAN
C4.0	STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
C4.1	STORMWATER POLLUTION PREVENTION PLAN DETAILS
C4.2	STORMWATER POLLUTION PREVENTION PLAN NOTES
C4.3	STORMWATER POLLUTION PREVENTION PLAN SPECIFICATIONS
C4.4	STORMWATER POLLUTION PREVENTION PLAN NOTES
C7.0	DETAILS
C8.0	LANDSCAPIING PLAN

REVISION RECORD

DATE	DESCRIPTION	SHEET(S)
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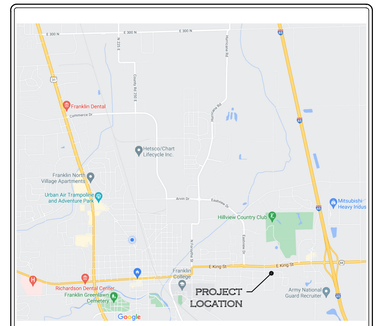

VICINITY MAP
NOT TO SCALE

SITE DATA

LOT AREA = 1.838± ACRES GROSS
= 1.838± ACRES NET OF R/W

EXISTING BUILDING FIRST FLOOR FOOTPRINT AREA = 4,141 SF
PROPOSED BUILDING FIRST FLOOR FOOTPRINT ADDITION = 706 SF

EXISTING GROSS FLOOR AREA = 6,000 SF
PROPOSED GROSS FLOOR ADDITION = 1,200 SF

ZONING DESIGNATIONS
SITE MXC – Mixed-Use: Community Center
NORTH MXC – Mixed-Use: Community Center
SOUTH RSN – RESIDENTIAL SUBURBAN NEIGHBORHOOD
EAST MXC – Mixed-Use: Community Center
WEST MXC – Mixed-Use: Community Center

PROPOSED USE: Site and building improvements to support building additions of vet clinic.

PROPOSED COVENANTS: NONE

FLOOD ZONE DESIGNATION: X (SHADED)

PROPOSED START DATE SEPTEMBER 2, 2021
PROPOSED END DATE SEPTEMBER 2, 2022

~

In accordance with a memo from the City dated 04.28.2021:

Parking is based off of 1 space per employee at largest shift (with shift overlap) – 15 employees on April 26 = 15 spaces

PLUS

1 space per 300 sq.ft. of gross floor area of a veterinarian office – 7,052/300 = 24 spaces (also = 7,200/300)

TOTAL REQUIRED = 39 spaces with at least 2 of those meeting ADA requirements

(The area of the expanded parking lot will need to include a minimum of 5% interior landscaping to be located within landscape islands a minimum of 300 sq.ft. in area with 1 tree planted per required 300 sq.ft.)

PROJECT ENGINEER:

Main Streeet Consulting Company
675 North Main Street
Franklin, IN 46131-1345
Contact: Bradley P. Ott, P.L.S., P.E.
Telephone: 317.459.4765
ott@mainstreetconsulting.com

PROJECT CONTACT:

Mike DuKate
DuKate Fine Remodeling, Inc.
2111 Holiday Lane
Franklin, IN 46131
317-736-9961 ph
mike@dukate.net

PROJECT OWNER:

John P & Jennifer W Clarke
Hillview Veterinary Clinic, LLC
1761 Thornburg Lane
Franklin, IN 46131
jclarke@hillviewvets.com
(317)736-8880

Know what's below. Call before you dig.

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www.mainstreetconsulting.com

BRADLEY P. OTT
REGISTERED
Nº PE0200097
STATE OF INDIANA
PROFESSIONAL ENGINEER

REVISIONS
. . .

TITLE SHEET

Hillview Veterinary Clinic, LLC
1761 THORNBURG LANE, FRANKLIN, IN
NEEDHAM TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C0.0-TS.DWG
DATE: 08.30.2021
PROJ. NO.: 21.018
DRAWN BY: B.OTT
SURVEYED BY: B.OTT
SCALE: ~

TITLE

SHEET NO.:
C0.0

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EXISTING LEGEND:

DESCRIPTION:		DESCRIPTION:	
	EXISTING ASPHALT	TP	TRAFFIC POLE
	EXISTING LANDSCAPING	TM	TRAFFIC MANHOLE
	EXISTING CONCRETE	S	SANITARY MANHOLE
BM	TEMPORARY BENCH MARK	CO	CLEAN OUT
	SECTION CORNER	CI	CURB INLET
RF	REBAR FOUND	I	INLET
RS	REBAR SET		DOWNSPOUT
	POWER POLE	GM	GAS METER
	GUY WIRE	GV	GAS VALVE
ET	ELECTRIC TRANSFORMER	GM	GAS MARKER
	ELECTRIC CROSS BOX		BUSH
AC	AIR CONDITIONER		DECIDUOUS TREE
E	ELECTRIC METER BOX		CONIFEROUS TREE
	LIGHT POLE	x	FARM FIELD FENCE
	GUARD POST	o o	CHAIN LINK FENCE
T	TELEPHONE PEDESTAL		FLOWLINE
	SOIL BORING	ohel	OVERHEAD ELECTRIC LINE
MB	MAIL BOX	elec	UNDERGROUND ELECTRIC
	SIGN	tele	UNDERGROUND TELEPHONE
	WATER SPIGOT	f/opt	FIBER OPTIC LINE
	FIRE HYDRANT	wtr	WATER LINE
W	WATER METER	gas	GAS LINE

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TOPO NOTE:

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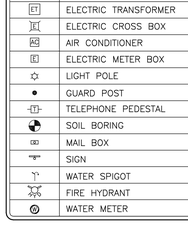
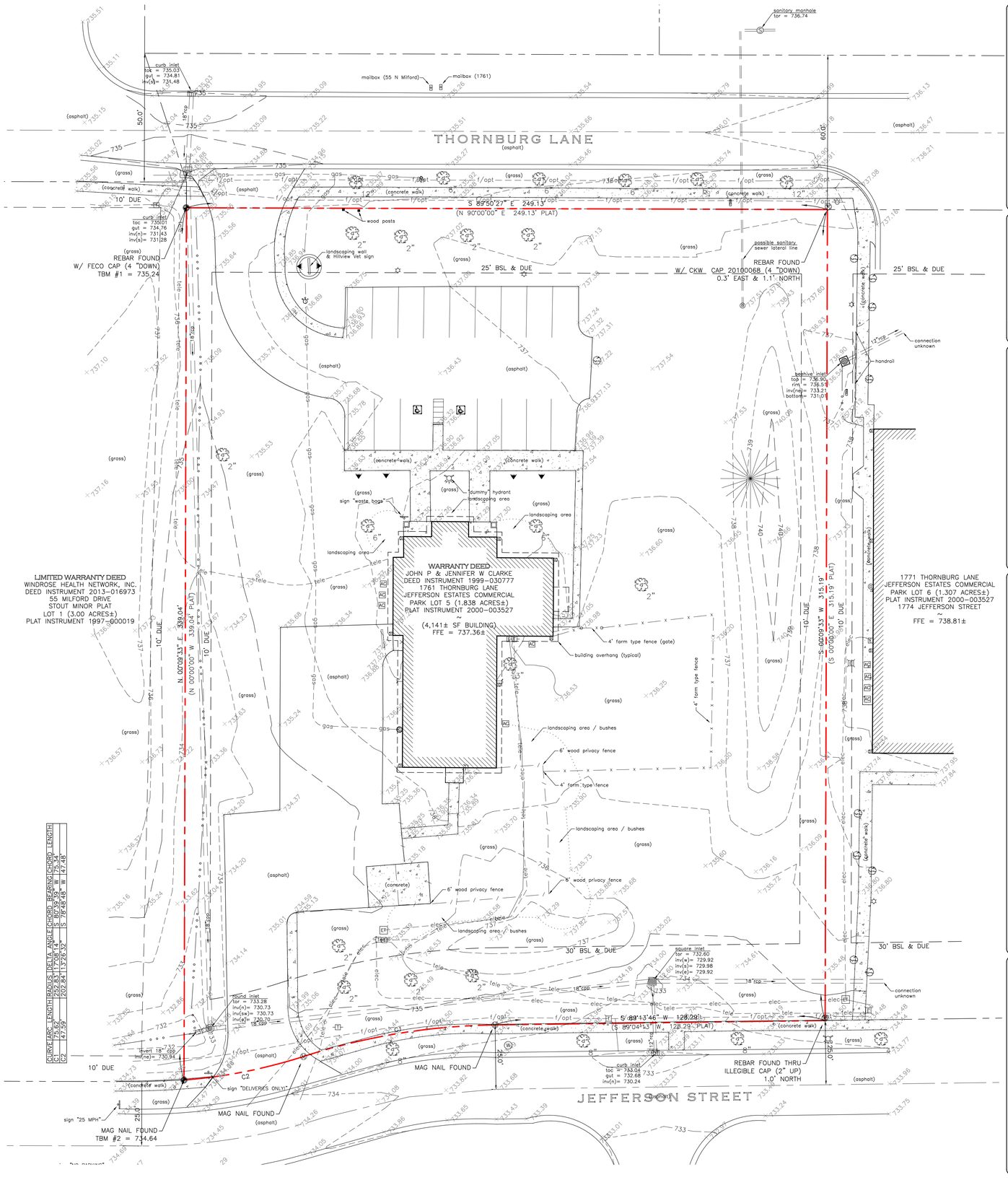
EXISTING STRIPE PAINTED PARKING SPACES:

15 REGULAR (10'x20')
+2 HANDICAPPED (13'x20')
17 TOTAL





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att@mainstreetconsulting.com
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BRADLEY P. OTT
REGISTERED
No. 9800012
STATE OF INDIANA
LAND SURVEYOR

REVISIONS

TOPOGRAPHIC SURVEY

Hillview Veterinary Clinic, LLC

1761 THORNBURG LANE, FRANKLIN, IN
NEEDHAM TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C1.0-TOPO.DWG
DATE: 08.30.2021
PROJ. NO.: 21.018
DRAWN BY: B.OTT
SURVEYED BY: B.OTT
SCALE: 1"=20'

TOPO

SHEET NO.:
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	SECTION CORNER		CURB INLET
	REBAR FOUND		INLET
	REBAR SET		DRAINAGE MANHOLE
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	GUY WIRE		GAS VALVE
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E	ELECTRIC METER BOX		CONIFEROUS TREE
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	GUARD POST		CHAIN LINK FENCE
	TELEPHONE PEDESTAL		FLOWLINE
	SOIL BORING	—ohel—	OVERHEAD ELECTRIC LINE
	MAIL BOX	—elec—	UNDERGROUND ELECTRIC
	SIGN	—tele—	UNDERGROUND TELEPHONE
	WATER VALVE	— f/opt —	FIBER OPTIC LINE
	FIRE HYDRANT	— wtr —	WATER LINE
	WATER METER	— gas —	GAS LINE

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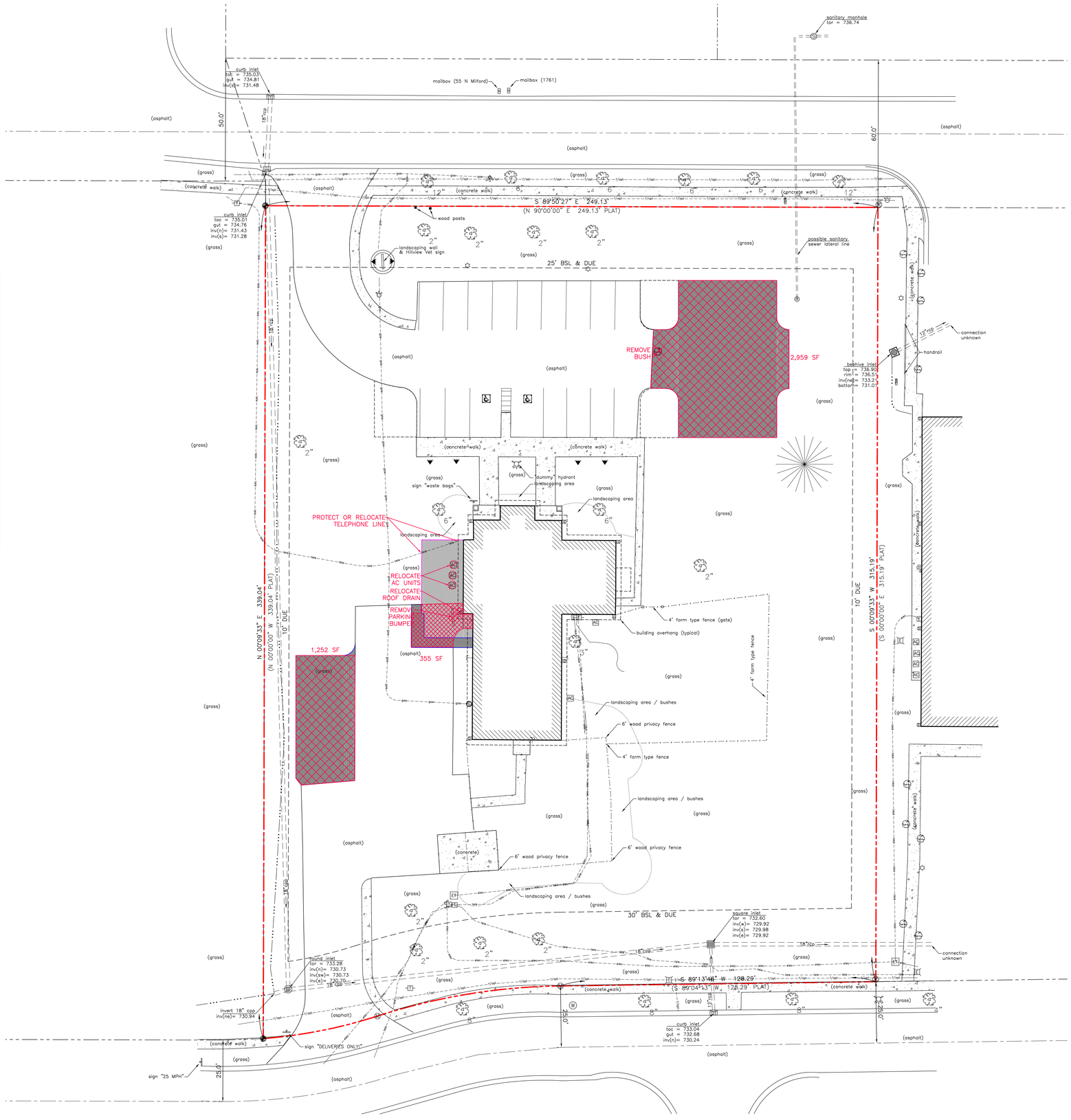

Know what's below. Call before you dig.

20 0 10 20
Scale 1" = 20'

DEMOLITION NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OFF-SITE OF ALL ITEMS SHOWN ON THE DEMOLITION PLAN INCLUDING ITEMS ENCOUNTERED DURING EXCAVATION OF BUILDING FOUNDATIONS AND UTILITY PLACEMENT.
2. PRIOR TO STARTING DEMOLITION, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS REQUIRED BY LOCAL GOVERNMENTAL AGENCIES.
3. THE CONTRACTOR SHALL COORDINATE WITH THE LOCAL UTILITY COMPANIES FOR THE DISCONNECTION AND REMOVAL OF SERVICES TO EXISTING STRUCTURES.
4. ITEMS SHOWN ON THE DEMOLITION PLAN TO BE SALVAGED SHALL BE TRANSPORTED TO A LOCATION SPECIFIED BY THE OWNER OR HIS\HER REPRESENTATIVE.
5. ITEMS OF SALVAGEABLE VALUE TO THE CONTRACTOR MAY BE REMOVED WITH THE PERMISSION OF THE OWNER OR HIS\HER REPRESENTATIVE. THE CONTRACTOR SHALL NOT STORE THESE ITEMS ON SITE.
6. THE CONTRACTOR SHALL NOT USE EXPLOSIVES OR BURN DEBRIS.
7. CONDUCT DEMOLITION OPERATIONS TO ENSURE MINIMAL INTERFERENCE WITH ROADS, SIDEWALKS AND ANY OTHER ADJACENT OCCUPIED FACILITIES.
8. DO NOT CLOSE OR OBSTRUCT ROADS, SIDEWALKS, OR ANY OTHER OCCUPIED FACILITIES WITHOUT PERMISSION FROM THE LOCAL AUTHORITY HAVING JURISDICTION AND\OR PROPERTY OWNERS.
9. THE CONTRACTOR SHALL ENSURE SAFE PASSAGE OF PERSONS TRAVERSING THROUGH OR AROUND THE CONSTRUCTION SITE.
10. THE CONTRACTOR SHALL PROTECT SURROUNDING STRUCTURES, UTILITIES, AND OTHER FACILITIES FROM DAMAGE DURING DEMOLITION AND REMOVAL OPERATIONS.
11. BUILDING STRUCTURES INCLUDING FOUNDATIONS AND BASEMENTS, SHALL BE REMOVED AND BACKFILLED WITH APPROVED BACKFILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING EIGHT INCHES IN THICKNESS. EACH LIFT SHALL BE COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, OR IF SUCH REPORT IS UNAVAILABLE, TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557, MODIFIED PROCTOR METHOD +/- 3% OF OPTIMUM MOISTURE CONTENT.
12. UTILITIES SHALL BE REMOVED AND THE TRENCHES BACKFILLED WITH APPROVED BACKFILL MATERIAL. BACKFILL MATERIAL SHALL BE PLACED IN MAXIMUM EIGHT INCH LIFTS AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT OR TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557, MODIFIED PROCTOR METHOD +/- 3% OF OPTIMUM MOISTURE CONTENT.
13. TRANSPORT DEMOLITION MATERIAL TO AN INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT PERMITTED LANDFILL.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE CONSTRUCTION SITE AND SURROUNDING AREAS ARE FREE OF ACCUMULATED DEBRIS.

DEMOLITION LEGEND:

DESCRIPTION:	
	MISC LINE TO BE RELOCATED
	MISC. ITEM TO BE REMOVED/RELOCATED
	ASPHALT/CONCRETE TO BE REMOVED
	TOP SOIL TO BE REMOVED

MAIN STREET CONSULTING COMPANY
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BRADLEY R. OTT
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NO PE0200097
STATE OF INDIANA
PROFESSIONAL ENGINEER

REVISIONS

DEMOLITION PLAN

Hillview Veterinary Clinic, LLC

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DEMO

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CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	75.62'	252.83'	17°08'14"	S 80°39'39" W	75.34'
C2	47.59'	202.84'	13°26'32"	S 78°48'48" W	47.48'

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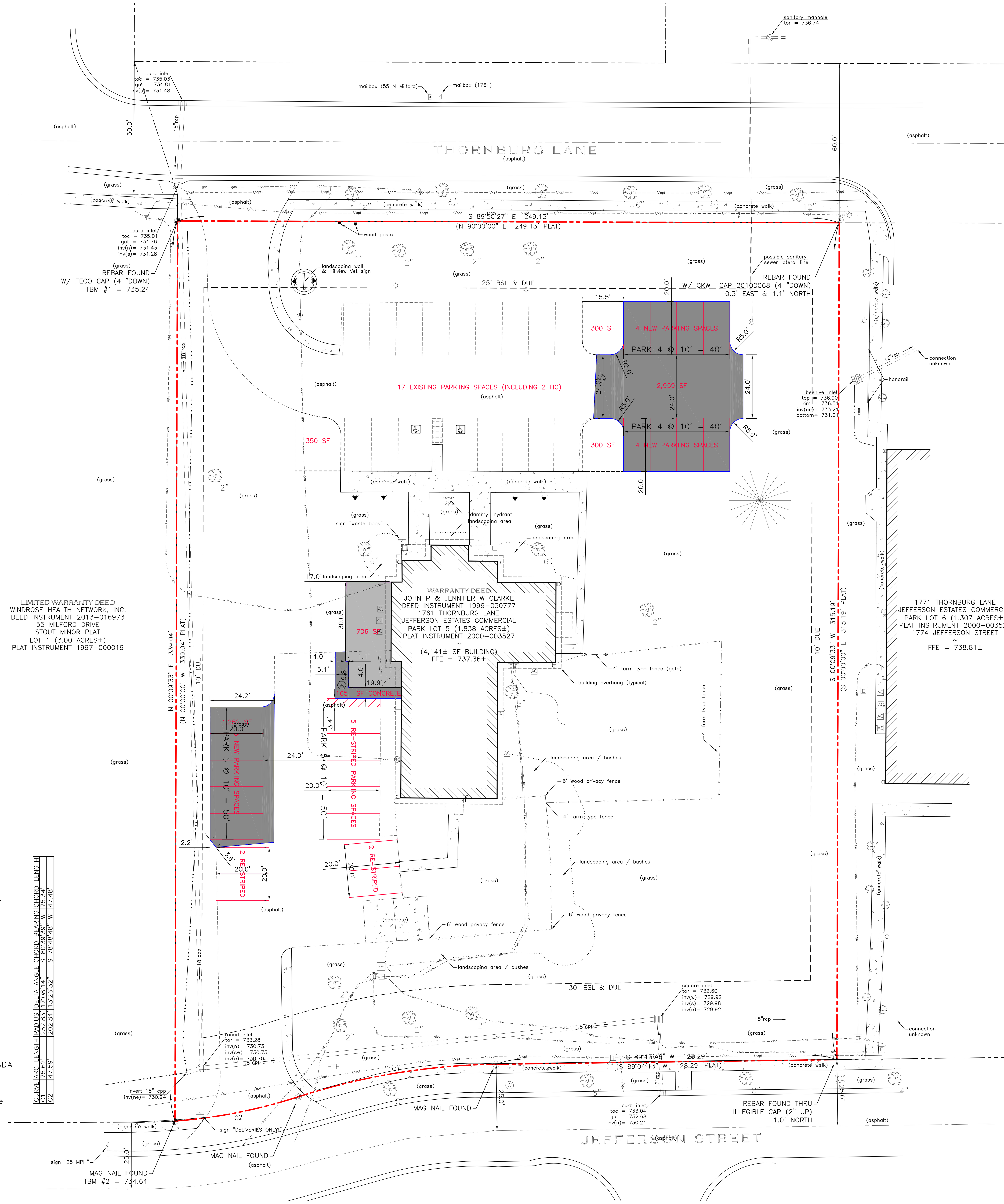

GENERAL NOTES

1. THE UTILITIES INDICATED ON THESE PLANS AND ON THE SURVEY MAY NOT BE A COMPLETE INVENTORY OF ALL THE EXISTING UTILITIES PRESENT ON AND AROUND THE SITE. THE LOCATION AND SIZE OF THESE UTILITIES MAY BE APPROXIMATE. THE ENGINEER SHALL NOT BE HELD LIABLE FOR ANY INACCURATE UTILITY INFORMATION INDICATED, IMPLIED, OR NOT INDICATED ON THESE PLANS.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND MAINTAIN IN SERVICE ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED IN THE DRAWINGS. ANY PIPING, WHICH CAN BE REMOVED DURING CONSTRUCTION WITHOUT UNDUE INTERRUPTION OF SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR, AT HIS EXPENSE WITH THE PERMISSION OF THE OWNER.
3. BEFORE WORKING WITH OR AROUND EXISTING UTILITIES, THE APPLICABLE UTILITY COMPANY SHALL BE CONTACTED BY THE CONTRACTOR.
4. THE CONTRACTOR SHALL PRESERVE AND PROTECT PROPERTY MARKERS, SECTION CORNERS, SURVEY MARKS AND CITY BENCH MARKS, SUCH AS STONES, PIPES, OR OTHER MONUMENTS ENCOUNTERED. IF THE CONTRACTOR MUST RELOCATE THE PROPERTY MARKERS OR MONUMENTS, THEIR LOCATION SHALL BE REFERENCED BY A REGISTERED LAND SURVEYOR AND THE OWNER NOTIFIED BEFORE MOVING. ALL PROPERTY MARKERS AND MONUMENTS RELOCATED DURING CONSTRUCTION SHALL BE RE-ESTABLISHED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSPECT EACH DAY AND REMOVE ALL MUD, DIRT, GRAVEL AND LOOSE MATERIALS TRACKED, DUMPED, SPILLED OR WIND BLOWN FROM THE SITE ON TO OTHER SITES, RIGHT-OF-WAYS, PUBLIC OR PRIVATE STREETS, DRIVEWAYS, YARDS, OR SIDEWALKS. THE CONTRACTOR MUST CLEAN DAILY IF NECESSARY. WATER MAY BE USED AS A REDUCER.
6. ROADWAY SURFACING AND BASE MATERIALS, OR ANY OTHER PROPERTY REMOVED OR DAMAGED, SHALL BE REPLACED OR REPAIRED AS PROVIDED FOR IN THE SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AT HIS EXPENSE ALL AUTOMOBILE AND PEDESTRIAN TRAFFIC CONTROL DEVICES REQUIRED BY FEDERAL, STATE, COUNTY, CITY OR LOCAL AGENCIES. EVERY EFFORT SHALL BE MADE BY THE CONTRACTOR TO PROVIDE FOR ACCESS TO THE RESIDENCES ACROSS THE WORK AREA.
8. THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING EROSION CONTROL AND THE SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ALL LIABILITY, REAL, OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OR WORK ON THE PROJECT EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.
9. INFORMATION ON DETAIL DRAWINGS TAKES PRIORITY OVER ALL GENERAL DRAWINGS AND SCHEDULES. CONFLICTS SHALL BE RESOLVED ACCORDINGLY.
10. WHEN CONNECTIONS ARE TO BE MADE TO EXISTING PIPING AND STRUCTURES OR WHERE CONSTRUCTION IS IN THE VICINITY OF EXISTING PIPING THE LOCATION AND ELEVATION OF THE EXISTING PIPING SHALL BE FIELD VERIFIED AND NOTIFICATION GIVEN TO THE OWNER IF THE EXISTING PIPING IS FOUND TO BE DIFFERENT THAN THAT SHOWN ON THE DRAWINGS.
11. FOR CLARITY OF THESE DRAWINGS, PIPES MAY NOT BE DRAWN TO SCALE OR EXACTLY LOCATED.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR OR CONTRACTORS TO OBTAIN ALL FEDERAL, STATE, COUNTY, CITY OR LOCAL PERMITS FOR ANY AND ALL WORK REQUIRED UNLESS OTHERWISE NOTED. THE CONTRACTOR OR CONTRACTORS ARE RESPONSIBLE TO PAY FOR ALL REQUIRED PERMITS BY ANY OR ALL AGENCIES MENTIONED ABOVE UNLESS OTHERWISE NOTED IN THE CONTRACT OR SPECIFICATIONS. ALL ASSOCIATED BONDING REQUIREMENTS AND COSTS ARE INCIDENTAL TO THE CONTRACT.
13. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND ELEVATIONS DURING THE ENTIRE CONSTRUCTION SCHEDULE. IF ANY DISCREPANCIES ARE FOUND IN THESE ENGINEERING PLANS FROM ACTUAL FIELD DIMENSIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
14. ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
15. ALL TRAFFIC AND STREET SIGNAGE SHALL MEET MUTCD STANDARDS, LATEST EDITION.

SITE LAYOUT NOTES

1. ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY, OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
2. ALL PARKING STRIPES ARE TO BE 4" PAINTED WHITE. UNLESS OTHERWISE NOTED ON THE PLANS, DETAILS, OR SPECIFICATIONS.
3. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT OR FACE OF CURB, WHERE APPLICABLE.
4. ALL DIMENSIONS ARE TO OUTSIDE FACE OF BRICK OR FACING MATERIAL, WHERE APPLICABLE.
5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND ELEVATIONS DURING THE ENTIRE CONSTRUCTION SCHEDULE. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM ACTUAL FIELD DIMENSIONS, THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY.
6. PROVIDE SMOOTH TRANSITION FROM NEWLY PAVED AREAS TO EXISTING AREAS AS NECESSARY. ALL AREAS WHERE PROPOSED PAVEMENT MEETS EXISTING PAVEMENT, THE EXISTING EDGE OF PAVEMENT SHALL BE FREE OF ALL LOOSE DEBRIS. THE EDGE OF EXISTING ASPHALT PAVEMENT SHALL BE PROPERLY SEALED WITH A TACK COAT MATERIAL IN ALL AREAS WHERE NEW ASPHALT PAVEMENT IS INDICATED TO JOIN EXISTING.
7. ALL EXCAVATED AREAS TO BE SEEDED AND/OR SODDED AFTER FINISH GRADING UNLESS OTHERWISE NOTED. ALL NEWLY SODDED/SEEDED AREAS SHALL HAVE A MINIMUM OF 4" OF TOPSOIL. HOLD SOIL DOWN 1" FROM PAVEMENT ELEVATION. CONTRACTOR TO SUPPLY STRAW MULCH WHERE GRASS SEED HAS BEEN PLANTED.
8. RESURFACE OR RECONSTRUCT AT LEAST TO ORIGINAL CONDITIONS ALL AREAS WHERE TRAFFIC BY CONTRACTORS, SUBCONTRACTORS OR SUPPLIERS HAVE DAMAGED EXISTING PAVEMENT, LAWNS OR OTHER IMPROVEMENTS DURING CONSTRUCTION, AFTER CONSTRUCTION WORK IS COMPLETE.
9. ALL UTILITY TRENCHES WITHIN 5 FEET OF PAVEMENT SHALL BE COMPLETELY BACKFILLED WITH GRANULAR BACKFILL.
10. ALL RADII INDICATED SHALL BE CONSTRUCTED AS CIRCULAR ARCS.

PROPOSED SITE LEGEND:

DESCRIPTION:	DETAIL #/SH. #
ROW PAVEMENT	NA
HEAVY DUTY PAVEMENT	NA
LIGHT DUTY PAVEMENT	DETAIL 03/C7.0
INDOT ROW PAVEMENT	NA
7" PLAIN CONCRETE PAVEMENT	NA
Ⓐ COMBINED CURB AND WALK	DETAIL 07/C7.0
Ⓑ COMBINED CONCRETE CURB & GUTTER (TY. III)	NA
Ⓒ HANDICAP PARKING SIGN	NA
Ⓓ HANDICAP PARKING SYMBOL	NA
Ⓔ HANDICAP RAMP	NA

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BRADLEY P. OTT REGISTERED No PE0200097 STATE OF INDIANA PROFESSIONAL ENGINEER

REVISIONS

SITE PLAN

Hillview Veterinary Clinic, LLC
1761 THORNBURG LANE, FRANKLIN, IN
NEEDHAM TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C2.0-SITE.DWG
DATE: 08.30.2021
PROJ. NO.: 21.018
DRAWN BY: B.OTT
SURVEYED BY: B.OTT
SCALE: 1"=20'

SITE

SHEET NO.: C2.0

BENCHMARKS:

FRANKLIN 1920 NO 1 1974 = 730.55 (NAVD 1988)
REFERENCE MARK 1 IS A STANDARD DISK STAMPED FRANKLIN 1920 NO 1 1974 SET IN A DRILL HOLE IN THE TOP AND SOUTHWEST CORNER OF THE CONCRETE BASE OF RAILROAD CROSSING LIGHT , 24 FEET NORTH OF THE CENTERLINE OF MADISON STREET AND 16 FEET EAST OF THE EAST RAIL OF THE RAILROAD BETWEEN CROWELL AND DEPOT STREETS.

TBM#1 = 735.24
REBAR WITH YELLOW PLASTIC CAP MARKED FECO FOUND 4 INCHES DOWN AT THE NORTHWEST CORNER OF LOT 5.

TBM#2 = 734.64
MAG NAIL DOUND AT THE NORTH EDGE OF THE SIDEWALK AT THE SOUTHWEST CORNER OF LOT 5.

UTILITY STATEMENT:

The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although the surveyor does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

EXISTING LEGEND:

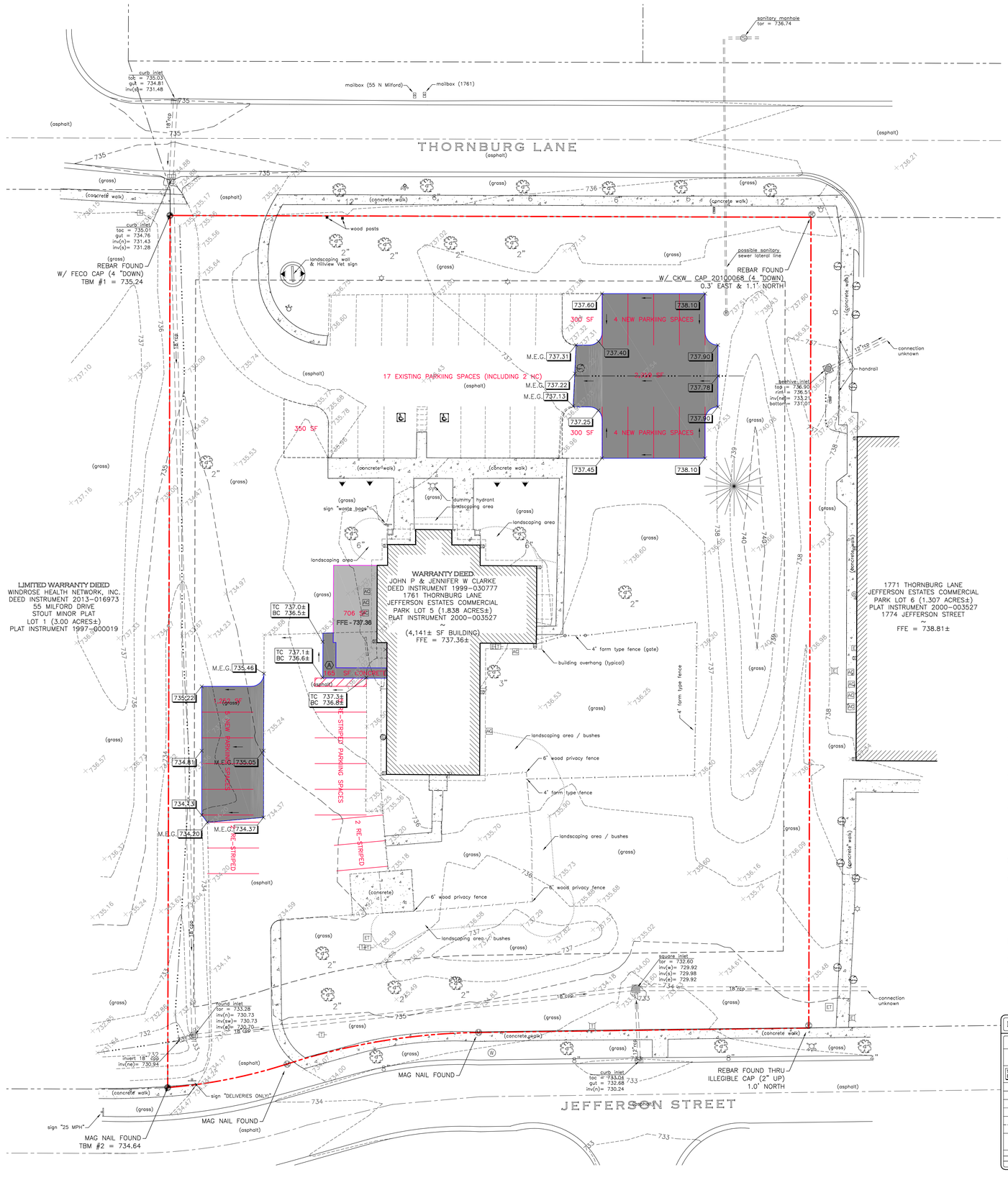
DESCRIPTION:		DESCRIPTION:
	EXISTING ASPHALT	TRAFFIC POLE
	EXISTING STONE	TRAFFIC MANHOLE
	EXISTING CONCRETE	SANITARY MANHOLE
	TEMPORARY BENCH MARK	CLEAN OUT
	SECTION CORNER	CURB INLET
	REBAR FOUND	INLET
	REBAR SET	DRAINAGE MANHOLE
	POWER POLE	GAS METER
	GUY WIRE	GAS VALVE
ET	ELECTRIC TRANSFORMER	GAS MARKER
	ELECTRIC CROSS BOX	BUSH
AC	AIR CONDITIONER	DECIDUOUS TREE
E	ELECTRIC METER BOX	CONIFEROUS TREE
	LIGHT POLE	FARM FIELD FENCE
	GUARD POST	CHAIN LINK FENCE
	TELEPHONE PEDESTAL	FLOWLINE
	SOIL BORING	OVERHEAD ELECTRIC LINE
	MAIL BOX	UNDERGROUND ELECTRIC
	SIGN	UNDERGROUND TELEPHONE
	WATER VALVE	FIBER OPTIC LINE
	FIRE HYDRANT	WATER LINE
	WATER METER	GAS LINE

FLOOD ZONE NOTE:

The accuracy of any flood hazard data shown on this survey is subject to map scale uncertainty and to any other uncertainty in location or elevation on the referenced Flood Insurance Rate Map. The property described on this Survey is located in Zone X (areas of minimal flooding) and IS NOT located in Zone A (Areas of 100 year flood) as said tract plots by scale on Community Panel No. 18081 C 0232 D of the Flood Insurance Rate Maps for City of Franklin, Johnson County, Indiana dated 08.02.2007.

TOPO NOTE:

THIS TOPOGRAPHIC SURVEY MAP WAS PREPARED IN ACCORDANCE WITH 865 IAC 1-12-12. THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACEMENT OR ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY, OR A SURVEYOR LOCATION REPORT.



GRADING NOTES

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2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS. IF ANY DISCREPANCIES ARE FOUND IN THESE PLANS FROM THE ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
3. THE EXCAVATING CONTRACTOR MUST TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY CONTRACTORS AND/OR UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
4. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START, TO VERIFY IF ANY UTILITIES ARE PRESENT ONSITE. ALL VERIFICATIONS (LOCATION, SIZE AND DEPTH) SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING IS AROUND OR OVER EXISTING UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE OF THAT UTILITY COMPANY CAN BE PRESENT TO INSTRUCT AND OBSERVE DURING CONSTRUCTION.
5. TRENCHES FOR ALL STORM PIPES SHALL BE BACKFILLED COMPLETELY WITH ENGINEERED GRANULAR MATERIAL IF WITHIN 5 FEET OF PAVEMENT.
6. AFTER STRIPPING TOPSOIL MATERIAL, PROOFROLL WITH A MEDIUM WEIGHT ROLLER TO DETERMINE LOCATIONS OF ANY POCKETS OF UNSUITABLE MATERIAL. THE NECESSITY FOR SUBDRAINS AND/OR REMOVAL OF ANY UNSUITABLE MATERIAL WITHIN THE PROPOSED PARKING AREAS WILL BE DETERMINED AT THE TIME OF CONSTRUCTION.
7. PROVIDE POSITIVE DRAINAGE WITHOUT PONDING, IN ALL AREAS, AFTER INSTALLATION. CONTRACTOR TO TEST FOR, AND CORRECT, IF ANY, "BIRD BATH" CONDITIONS.
8. ALL PROPOSED SPOT ELEVATIONS ARE THE FINAL PAVEMENT AND FINAL GRADE ELEVATIONS.
9. SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE ELEVATIONS INDICATED.
10. FLOW LINE ELEVATIONS ARE GIVEN AT END OF CONCRETE END SECTIONS.
11. TOR = TOP OF RIM AND REFLECTS PAVEMENT GRADE.

PROPOSED GRADING LEGEND:

DESCRIPTION:		ABBREVIATIONS
800.00	PROPOSED SPOT	EP = EDGE OF PVMT.
TC 800.50 BC 800.00	PROPOSED CURB ELEVATION	TC = TOP OF CURB
800	PROPOSED CONTOUR	BC = BOTTOM OF CURB
800	EXISTING CONTOUR	TOR = TOP OF RIM (PAVEMENT ELEVATION)
	PROPOSED GRADE BREAK	INV = STORM INVERT
	PROPOSED FLOOD RTE/EMGR SPILLWAY	FL = FLOWLINE
	PROPOSED STORM SEWER	ME = MATCH EXISTING

Know what's below. Call before you dig.

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Scale 1" = 20'

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BRADLEY R. OTT
REGISTERED
NO PE0200097
STATE OF INDIANA
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REVISIONS

GRADING PLAN

Hillview Veterinary Clinic, LLC

1761 THORNBURG LANE, FRANKLIN, IN
NEEDHAM TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C3.0-GP.DWG
DATE: 08.30.2021
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DRAWN BY: B.OTT
SURVEYED BY:
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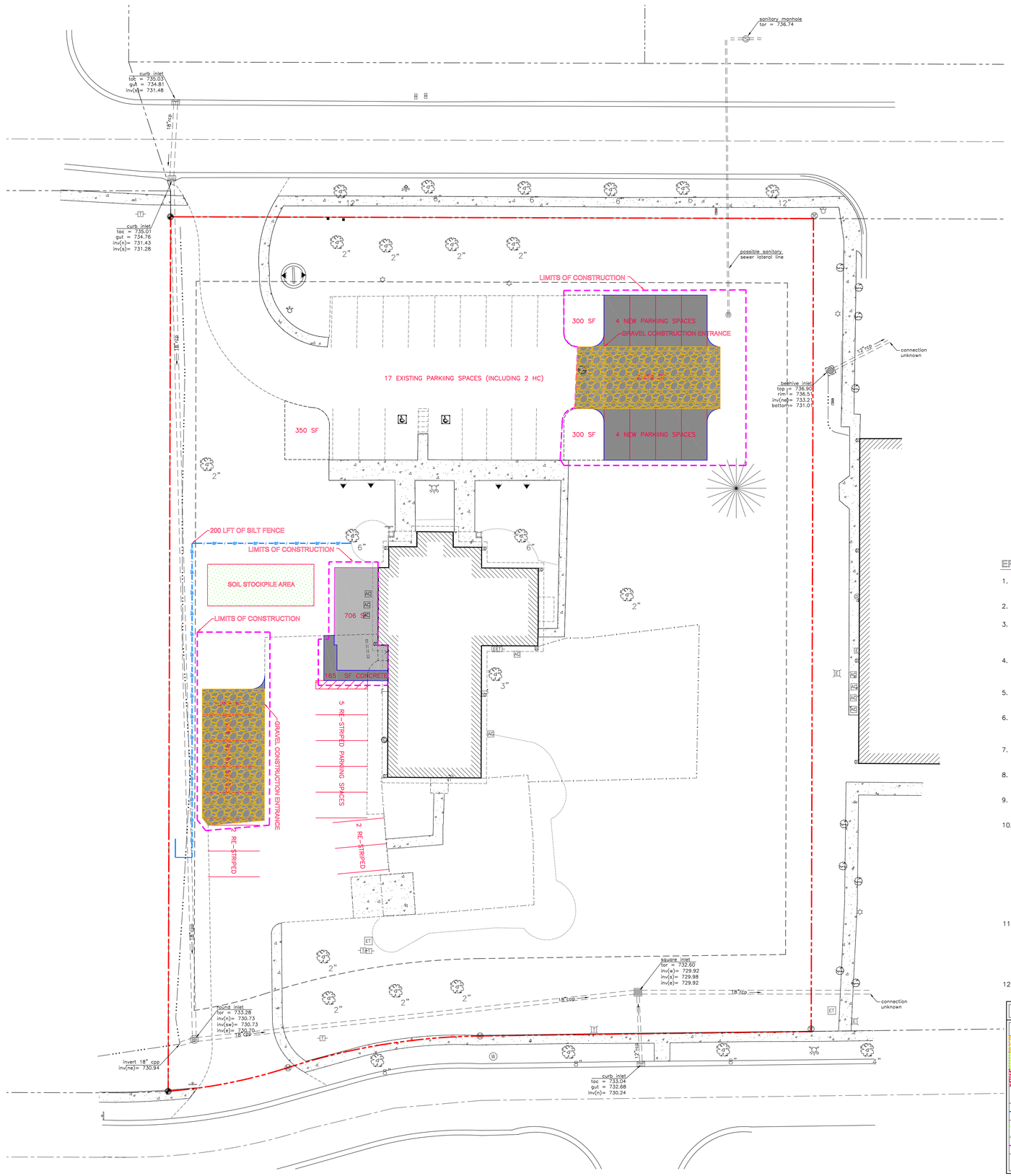

EROSION CONTROL NOTES

1. ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
2. LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
3. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.
4. SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN THE RECEIVING STREAM. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
5. WASTES AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORMWATER RUNOFF. PROPER DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS IS REQUIRED.
6. SEDIMENT BEING TRACED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
7. SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND REDISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.
8. IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
9. ALL EXISTING STRUCTURES, FENCING, TREES AND ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF SITE. BURNING IS NOT ALLOWED ON-SITE.
10. SCHEDULE OF EARTHWORK ACTIVITIES:
    a) THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED SOON AS POSSIBLE. TEMPORARY VEGETATION OR MULCHING SHALL BE USED TO PROTECT EXPOSED AREAS IF PERMANENT VEGETATION CANNOT BE SEEDED WITHIN 14 DAYS OR ACTIVITY CEASES FOR MORE THAN 21 DAYS OR AS DIRECTED BY THE ENGINEER.
    b) TOPSOIL REPLACEMENT SHALL TAKE PLACE FROM MARCH 1 TO OCTOBER 31. STOCKPILE TOPSOIL AT ALL OTHER TIME OF THE YEAR. PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.
11. INFORM ALL GENERAL CONTRACTORS, CONSTRUCTION MANAGEMENT FIRMS, GRADING OR EXCAVATING CONTRACTORS, AND ALL OTHER CONTRACTORS WITH PRIMARY OVERSIGHT ON INDIVIDUAL BUILDING LOTS OF THE TERMS AND CONDITIONS OF THE STORM WATER RULE 5, AND THE CONDITIONS AND STANDARDS OF THIS EROSION CONTROL PLAN, SCHEDULE FOR IMPLEMENTATION, AND THE CONSTRUCTION SITE EROSION CONTROL PLAN REPORT.
12. ADDITIONAL MEASURES MAY BE REQUIRED IN THE FIELD BY THE INSPECTOR.

PROPOSED EROSION CONTROL LEGEND:

DESCRIPTION:	DETAIL #/SH. #
PROPOSED GRAVEL CONST. ENTRANCE	DETAIL 01/C4.1
PROPOSED EROSION CONTROL MAT	DETAIL 02/C4.1
PROPOSED RIPRAP	DETAIL 03/C4.1
DB PROPOSED DANDY BAG INLET PROTECTION	DETAIL 04/C4.1
-/-SF-/- PROPOSED SILT FENCE	DETAIL 05/C4.1
TEMPORARY AND PERMANENT SEEDING	DETAIL 06/C4.1
CONSTRUCTION LIMITS	

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Scale 1" = 20'

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SWPPP

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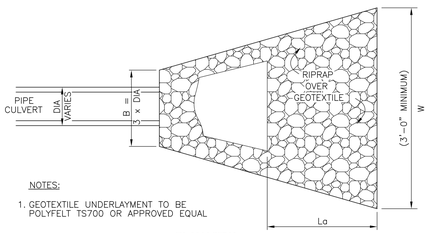
EROSION CONTROL SCHEDULE POST CONSTRUCTION

MEASURE	MAINTENANCE/MONITORING ACTIVITY	SCHEDULE	INSTALLATION SEQUENCE
DETENTION/RETENTION BASINS	• CLEANING AND REMOVAL OF DEBRIS • HARVEST VEGETATION WHEN 50% REDUCTION IN THE ORGINAL OPEN WATER SURFACE AREA OCCURS. • REPAIR OF EMBANKMENT AND SIDE SLOPES • REPAIR OF CONTROL STRUCTURE	ANNUAL OR AS NEEDED	DURING ROUGH GRADING
	• REMOVAL OF ACCUMULATED SEDIMENT FROM FOREBAYS OR SEDIMENT STORAGE AREAS WHEN 60% OF THE ORIGINAL VOLUME HAS BEEN LOST	5-YEAR CYCLE	
	• REMOVAL OF ACCUMULATED SEDIMENT FROM MAIN PART OF POND ONCE 50% OF ORIGINAL VOLUME HAS BEEN LOST	20-YEAR CYCLE	
PERMANENT SEEDING	• WATERING ONCE ESTABLISHED & THROUGH DROUGHT TIMES • MOWING AND LITTER DEBRIS REMOVAL • STABILIZATION OF ERODED SLOPES • NUTRIENT AND PESTICIDE USE MANAGEMENT • DETHATCHING AND REMOVAL OF THATCHING • DISCING OR AERATION	ANNUAL OR AS NEEDED	AFTER FINAL GRADING
	• SEEDING/SODDING TO RESTORE GROUND COVER (USE PROPER EROSION AND SEDIMENT CONTROL)	5-YEAR CYCLE	
EROSION CONTROL MATS	• PER MANUFACTURER'S RECOMMENDATIONS	PER MANUFACTURER'S RECOMMENDATION	AFTER FINAL GRADING

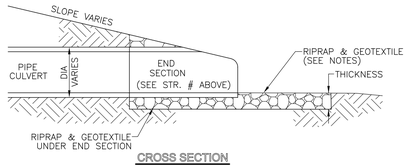


NOTES:

1. GEOTEXTILE UNDERLAYMENT TO BE POLYFELT TS700 OR APPROVED EQUAL

PLAN VIEW

SIZE	B	La	W	THICKNESS	d 50
18"	4.5'	8'	7'	6"	2"



CROSS SECTION

SIZE OF STONE	% OF TOTAL WEIGHT LARGER THAN GIVEN SIZE
3K	0
2K	20
K	50
0.1K	90

WHERE K = d_{50}

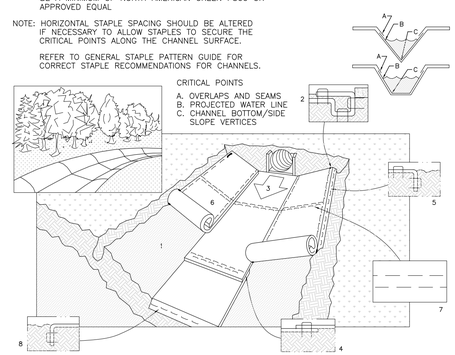
NOTE:
DEPTH OF RIP RAP SHALL NOT BE LESS THAN 3 x d_{50}

RIPRAP DETAIL @ END SECTION 03 C4.1
NOT TO SCALE

NOTE: ALL BLANKET REQUIRED FOR THIS PROJECT SHALL BE A MINIMUM OF NORTH AMERICAN GREEN P300 OR APPROVED EQUAL

NOTE: HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

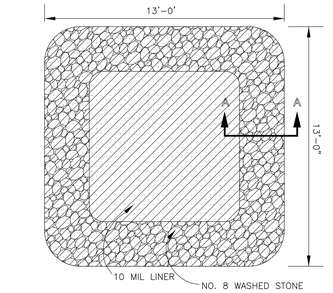
REFER TO GENERAL STAPLE PATTERN GUIDE FOR CORRECT STAPLE RECOMMENDATIONS FOR CHANNELS.



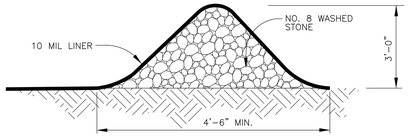
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.
4. PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED (2" FOR C350 MATTING).
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NORTH AMERICAN GREEN
14649 HIGHWAY 41 NORTH, EVANSVILLE, INDIANA 47711
USA 1-800-772-2040 CANADA 1-800-448-2040

EROSION CONTROL BLANKET DETAIL 02 C4.1
NOT TO SCALE

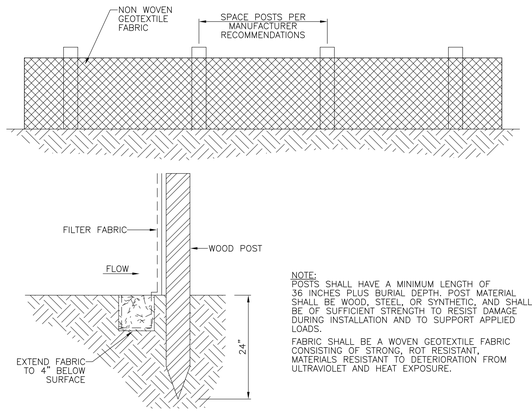


PLAN VIEW



CROSS SECTION A-A

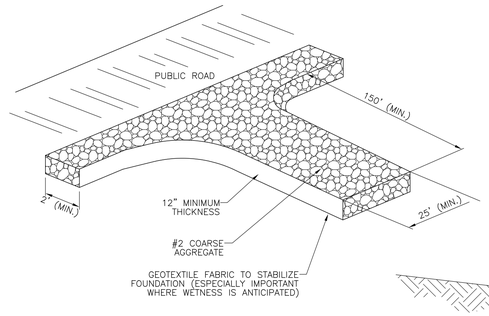
CONCRETE (MASONRY) CLEANOUT
NOT TO SCALE



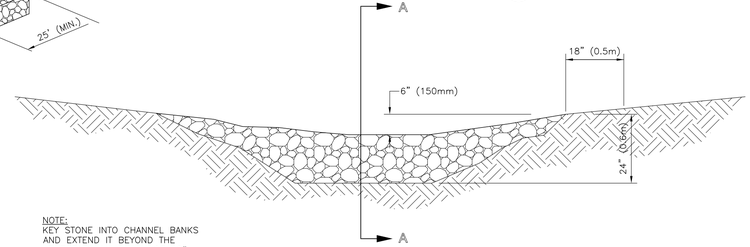
NOTE:
POSTS SHALL HAVE A MINIMUM LENGTH OF 36 INCHES PLUS BURIAL DEPTH. POST MATERIAL SHALL BE WOOD, STEEL, OR SYNTHETIC, AND SHALL BE OF SUFFICIENT STRENGTH TO RESIST DAMAGE DURING INSTALLATION AND TO SUPPORT APPLIED LOADS.

FABRIC SHALL BE A WOVEN GEOTEXTILE FABRIC CONSISTING OF STRONG, ROT RESISTANT, MATERIALS RESISTANT TO DETERIORATION FROM ULTRAVIOLET AND HEAT EXPOSURE.

SILT FENCE CONSTRUCTION 05 C4.1
NOT TO SCALE

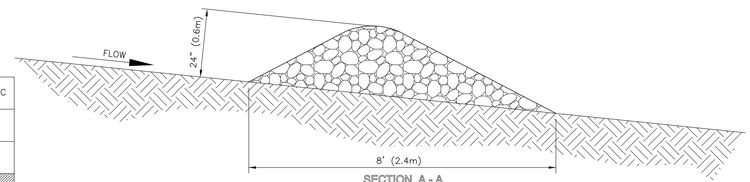


TEMPORARY CONSTRUCTION ENTRANCE 01 C4.1
NOT TO SCALE



NOTE:
KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" (0.5m) TO PREVENT FLOW AROUND DAM.

VIEW LOOKING UPSTREAM



SECTION A-A

	SOIL CONDITION			SHADE TOLERANCE	CLOSE MOWING TO 2-3 1/2 INCHES	TRAMPING TOLERANCE	FERTILITY NEEDS	WINTER HARDINESS	FLOODING TOLERANCE (DAYS)	MATURE HEIGHT (INCHES)	EMERGENCE TIME (DAYS)	SOIL TOLERANCE		
	WET	NORM	DRY									GEN.	SOIL	SPRAY
CREEPING RED FESCUE FESTUCA RUBRA	2	1	2	1	1	1	MED.	1	20-25	12-18	7-21			S
KENTUCKY BLUEGRASS POA PROTINSIS	2	1	2	1	1	1	MED.	1	20-35	12-18	10-20			MT
TALL FESCUE FESTUCA L. ARUNDINACEA	2	1	1	1	1	1	LOW	1	24-35	24-36	5-14		T	
PERENNIAL RYEGRASS LOLLUM PERENNE	2	1	2	–	1	2	MED. HIGH	2	15-20	12-18	5-10		MT	
CROWNVETCH CORONILLA VARLA	–	1	1	2	–	–	LOW	1	5-10	24	14-21	T		
RED CLOVER TRIFOLIUM PROTENSE	–	1	–	2	–	–	MED.	1	7-10	18	5-10	S	S	

RANKING:
1 GOOD
2 MEDIUM
– NOT TOLERANT

SALT TOLERANCE (TO BOTH SOIL SALTS & SPRAY)
T TOLERANCE
MT MEDIUM TOLERANCE
S SLIGHT TOLERANCE

SEED TOLERANCE

SEEDBED PREPARATION

APPLY LIME TO RAISE THE pH TO THE LEVEL NEEDED FOR SPECIES BEING SEEDED. APPLY 23 POUNDS OF 12-12-12 ANALYSIS FERTILIZER (OR EQUIVALENT) PER 1000 SQ. FT. (APPROXIMATELY 1000 POUNDS PER ACRE) OR FERTILIZE ACCORDING TO TEST. APPLICATION OF 150 LBS. OF AMMONIUM NITRATE ON AREAS LOW IN ORGANIC MATTER AND FERTILITY WILL GREATLY ENHANCE VEGETATIVE GROWTH.

WORK THE FERTILIZER AND LIME INTO THE SOIL TO A DEPTH OF 2-3 INCHES WITH A HARROW, DISK OR RAKE OPERATED ACROSS THE SLOPE AS MUCH AS POSSIBLE.

SEEDING

SELECT A SEED MIXTURE BASED ON PROJECTED USE OF THE AREA (SEE PERMANENT SEED MIXTURE CHART). WHILE CONSIDERING BEST SEEDING DATES. IF PERMANENT SEEDING IS NOT PERMITTED USE TEMPORARY SEEDING UNTIL PERMANENT SEEDING CAN BE APPLIED. IF TOLERANCES ARE A PROBLEM, SUCH AS SALT TOLERANCE OF SEEDINGS ADJACENT TO STREETS AND HIGHWAYS, SEE SEED TOLERANCE CHART.

TEMPORARY SEEDING DATES

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
WHEAT OR RYE										NON-IRRIGATED*		
OATS										IRRIGATED		
ANNUAL RYEGRASS										DORMANT SEEDING **		

PERMANENT SEEDING DATES

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

IRRIGATION NEEDED DURING THIS PERIOD, TO CONTROL EROSION AT TIMES OTHER THAN IN THE SHADED AREAS. USE MULCH.

* LATE SUMMER SEEDING DATES MAY BE EXTENDED 5 DAYS IF MULCH IS APPLIED.

** INCREASE SEEDING APPLICATION BY 50%.

SEED TOLERANCE CHART

SPECIES	SEEDING RATE		SUITABLE pH	SITE SUITABILITY *		
	LBS/ACRE	LBS/1000 SQ. FT.		DROUGHTY	WELL DRAINED	WET
LEVEL AND SLOPING, OPEN AREAS						
1. TALL FESCUE	35	.8	5.5-8.3	2	1	2
2. TALL FESCUE	25	.6	5.5-8.3		1	
RED CLOVER	5	.12				
3. KENTUCKY BLUEGRASS	15	.4	5.8-7.5	2	1	
CREEPING RED FESCUE	15	.4				
STEEP BANKS AND CUTS						
4. TALL FESCUE	15	.4	5.8-7.5	2	1	2
KENTUCKY BLUEGRASS	25	.6				
5. TALL FESCUE	35	.8	5.5-8.3	2	1	
EMERALD CROWNVETCH**	10	.25				
LAWNS AND HIGH MAINTENANCE AREAS						
6. KENTUCKY BLUEGRASS	40	.9	5.8-7.5	2	1	
CREEPING RED FESCUE	40	.9				
7. PERENNIAL RYEGRASS (TURF TYPE)	170	4.0	5.0-7.5		1	
8. TALL FESCUE	170	4.0	5.5-8.3	2	1	2

* 1 – PREFERRED 2 – WILL TOLERATE ** INOCULATE WITH SPECIFIC INOCULANT.

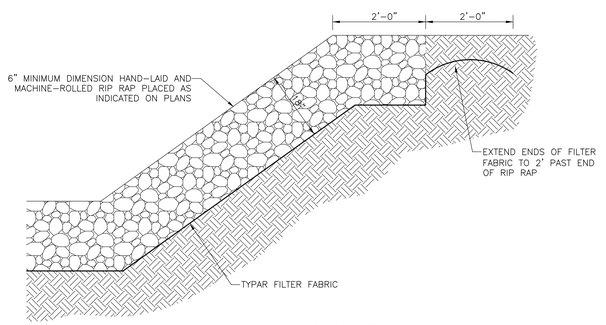
SEEDING DETAIL 06 C4.1

TEMPORARY SEEDINGS

TYPE OF SEED	1000 SQ. FT.	ACRE	REMARKS
WHEAT OR RYE	3.5 LBS.	2 BU.	COVER SEED 1" TO 1 1/2" DEEP
SPRING OATS	2.3 LBS.	3 BU.	COVER SEED 1" DEEP
ANNUAL RYEGRASS	1 LB.	40 LB.	COVER SEED 1/4" DEEP

* NOT NECESSARY WHERE MULCH IS APPLIED.

ROCK CHECK DAM DETAIL
NOT TO SCALE



RIPRAP DETAIL 03 C4.1
NOT TO SCALE

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ott@mainstreetconsulting.com
www.mainstreetconsulting.com

BRADLEY R. OTT
REGISTERED
№ PE0200097
STATE OF INDIANA
PROFESSIONAL ENGINEER

REVISIONS

SWPPP DETAILS

Hillview Veterinary Clinic, LLC
1761 THORNBURG LANE, FRANKLIN, IN
NEEDHAM TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C4.1-SWPPP.DWG
DATE: 08.30.2021
PROJ. NO.: 21.018
DRAWN BY: B.OTT
SURVEYED BY: ~
SCALE: ~

SWPPP

SHEET NO.:
C4.1

ASSESSMENT OF CONSTRUCTION PLAN ELEMENTS (Section A)

A1 INDEX SHOWING LOCATIONS OF REQUIRED PLAN ELEMENTS
SEE PLAN SHEET C0.0

A2 11"X17" PLAT OF BUILDING LOT NUMBERS/BOUNDARIES AND ROADS
PROVIDED SEPARATELY

A3 NATURE AND PURPOSE OF PROJECT
BUILDING AND SITE PARKING EXPANTSION FOR VET CLINIC.

A4 PROJECT SITE VICINITY MAP
SEE TITLE SHEET C0.0

A5 LEGAL DESCRIPTION OF PROJECT SITE
LATITUDE/LONGITUDE: 39°28'52.25"N / 86° 01'34.69"W
FOR LEGAL DESCRIPTION, SEE SHEETS C1.0 AND C2.0

A6 LOTS AND PROPOSED SITE IMPROVEMENTS
SEE SITE PLAN SHEET C2.0

A7 HYDROLOGIC UNIT CODE (14 DIGIT)
HYDROLOGIC UNIT CODE: 05120204090060

A8 STATE OR FEDERAL WATER QUALITY PERMITS
CONSTRUCTION IN A FLOODWAY (IDNR): N/A
401 WATER QUALITY CERTIFICATION (IDEM): N/A
SECTION 404 PERMIT (USACOE): N/A

A9 POINTS OF STORMWATER DISCHARGE FROM SITE
STORMWATER IS COLLECTED BY AN EXISTING STORMWATER SYSTEM WHICH DRAINS INTO THE EXISTING DETENTION OFF SITE TO THE SOUTH.

A10 ADJACENT WETLANDS, LAKES AND WATER COURSES
N/A

A11 RECEIVING WATERS
YOUNGS CREEK

A12 POTENTIAL DISCHARGES TO GROUND WATER
NONE KNOWN

A13 FLOODPLAINS, FLOODWAYS AND FLOODWAY FRINGES
NONE KNOWN

A14 PRE-CONSTRUCTION/POST-CONSTRUCTION PEAK DISCHARGE
PEAK DISCHARGE (ALLOWABLE) 100-YEAR: 0.69 CFS
PEAK DISCHARGE (POST-CONSTRUCTION) 100-YEAR: 0.32 CFS

A15 ADJACENT LAND USE
NORTH – VACANT
SOUTH – SF RESIDENTIAL
EAST – OFFICE
WEST – MEDICAL

A16 CONSTRUCTION LIMITS
SEE EROSION CONTROL PLAN SHEET C4.0

A17 EXISTING VEGETATIVE COVER
THE SITE IS CURRENTLY AN EXISTING ANIMAL VET CLINIC. WITH ROOFTOPS, PAVEMENT, GRASS, AND LANDSCAPING.
.

A18 SOILS MAP AND SOIL DESCRIPTIONS
EXISTING SOIL TYPES & DESCRIPTION

Johnson County, Indiana (IN081)

Johnson County, Indiana (IN081)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
YbvA	Brookston silty clay loam-Urban land complex, 0 to 2 percent slopes	0.3	18.0%
YclA	Crosby silt loam, fine-loamy subsoil-Urban land complex, 0 to 2 percent slopes	1.5	81.0%
YcmB2	Crosby-Urban land-Miami silt loams complex, 2 to 4 percent slopes, eroded	0.0	1.0%
Totals for Area of Interest		**1.9**	**100.0%**

A19 PROPOSED STORMWATER SYSTEMS
.
.
NA

A20 OFF-SITE CONSTRUCTION ACTIVITIES
NA

A21 PROPOSED SOIL STOCKPILES
SEE EROSION CONTROL PLAN SHEET C4.0 FOR LOCATION(S)

A22 SITE TOPOGRAPHY
SEE GRADING PLAN SHEET C3.0

A23 FINAL SITE TOPOGRAPHY
SEE GRADING PLAN SHEET C3.0

EROSION CONTROL PLAN - CONSTRUCTION COMPONENT (Section B)

B1 POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

THE MATERIALS AND SUBSTANCES LISTED BELOW ARE EXPECTED ON-SITE

- PAINTS, THINNERS AND SOLVENTS
  ENSURE THAT CONTAINERS HAVE LIDS SO THAT THEY CAN BE COVERED BEFORE PERIODS OF RAIN, AND KEEP CONTAINERS IN DRY, COVERED AREA WHENEVER POSSIBLE.
- BATTERIES
  STORE ONSITE IN DRY COVERED AREA AND DISPOSE OF PER MANUFACTURER'S RECOMMENDATIONS IN CONJUNCTION WITH STATE, LOCAL AND FEDERAL REGULATIONS
- AEROSOL SPRAY PRODUCTS
  STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.
- ADHESIVES
  STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.
- BIOLOGICAL SOLID WASTE
  TRAP IN CONTAINERS, CLEANED REGULARLY, AND DISPOSED OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY. SCHEDULE WASTE COLLECTION MORE FREQUENTLY TO PREVENT CONTAINERS FROM OVERFILLING. UNTREATED, RAW SEWAGE OR SEPTAGE SHOULD NEVER BE DISCHARGED OR BURIED ONSITE.

B1 POTENTIAL POLLUTANT SOURCES ASSOCIATED WITH CONSTRUCTION ACTIVITIES
(continued from previous column)

- REGULATED PCB MATERIAL
  STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.
- MOTOR OIL
  STORE PETROLEUM PRODUCTS FOR VEHICLES IN COVERED AREAS WITH LEAK-PROOF HEAVY DUTY PLASTIC LINER ON THE GROUND WITH DIKES IN PLACE TO CONTAIN AND SPILLS. IMMEDIATELY CONTAIN AND CLEAN UP ANY SPILLS WITH ABSORBENT MATERIALS. MOTOR OIL SHOULD BE CHANGED IN A DESIGNATED AREA WITH A METAL CATCH PAN OF 4'X4'X8" MIN. AND PROPERLY DISPOSED OF.
- ANTIFREEZE
  STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.
- FUEL
  STORE FUEL FOR VEHICLES IN COVERED AREAS WITH LEAK-PROOF HEAVY DUTY PLASTIC ON THE GROUND WITH DIKES IN PLACE TO CONTAIN AND SPILLS. IMMEDIATELY CONTAIN AND CLEAN UP ANY SPILLS WITH ABSORBENT MATERIALS.
- BRAKE FLUIDS
  STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.
- HYDRAULIC FLUIDS
  STORE IN APPROVED CONTAINERS, AND DISPOSE OF ACCORDING TO LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS OR OTHER PUBLIC AGENCY.
- RUBBLE-ASPHALT/CONCRETE
  DISPOSE OF IN PROPER CONTAINERS AND RECYCLE PER LOCAL, COUNTY, STATE AND FEDERAL REGULATIONS.
- LAND CLEARING DEBRIS
  RECYCLE APPROPRIATELY IN APPROPRIATELY MARKED CONTAINERS AND SCHEDULE REGULAR PICKUP BEFORE OVERFILLING OCCURS.
- WASTE
  ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED APPROVED CONTAINER. ALL TRASH AND NON-RECYCLABLE MATERIALS SHALL BE DEPOSITED IN THE DUMPSTER DAILY. THE DUMPSTER SHOULD EMPTIED PERIODICALLY AND NOT ALLOWED TO OVERFILL. DO NOT THROW TRASH ON GROUND OR BURY MATERIALS ON SITE.
- UNUSED BUILDING MATERIALS
  ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED APPROVED CONTAINER. ALL RECYCLABLE MATERIALS SHALL BE DEPOSITED IN THE DUMPSTER DAILY. THE DUMPSTER SHOULD EMPTIED PERIODICALLY AND NOT ALLOWED TO OVERFILL. DO NOT BURY MATERIALS ON SITE.
- CONCRETE (MASONRY) WASHOUT
  CONCRETE WASHOUT AREAS SHOULD A BERMED, SELF CONTAINED AREA APPROXIMATELY 10'X10'X3' IN PLACE TO CONTAIN THE CONCRETE, BUT ALLOW THE WATER TO INFILTRATE THE GROUND. DRIED MATERIAL SHALL BE REMOVED AND DISPOSED OF PROPERLY. THE CONCRETE WASHOUT AREA SHALL BE LOCATED IN AN AREA WHERE FUTURE PAVEMENT WILL BE INSTALLED, BUT AWAY FROM STORMWATER STRUCTURES AND WATER BODIES. SEE DETAIL.
- FERTILIZERS/PESTICIDES/DETERGENTS
  FERTILIZERS AND PESTICIDES WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TIME TO STORM WATER. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAG OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS. THE ORIGINAL LABEL AND SAFETY INFORMATION WILL BE RETAINED. STORAGE AREAS SHALL BE BERMED TO CONTAIN SPILL FROM RUNNING INTO GROUNDWATER OR STORM SYSTEM.

B2 SEQUENCE OF EROSION CONTROL MEASURES IMPLEMENTATION
INITIAL SETUP

- NOTIFY LOCAL GOVERNMENT DEPARTMENT OF P&Z FOR A PRECONSTRUCTION MEETING 48 HOURS IN ADVANCE OF START OF CONSTRUCTION
- NOTIFY IDEM PER RULE 5 NOI 48 HOURS PRIOR TO START OF CONSTRUCTION
- CALL FOR AN UNDERGROUND LOCATE TO VERIFY LOCATION OF EXISTING UTILITIES.
- FLAG OR DENOTE ALL CONSTRUCTION LIMITS.
- POST A NOTICE OF PROJECT IN PUBLICLY ACCESSIBLE LOCATION NEAR PROJECT FIELD OFFICE, TO INCLUDE A COPY OF COMPLETED NOI LETTER, NPDES PERMIT NUMBER (IF AVAILABLE), AND NAME, COMPANY NAME, AND CONTACT PERSON TELEPHONE NUMBER.
- INFORM ALL GENERAL CONTRACTORS, CONSTRUCTION MANAGEMENT FIRMS, GRADING OR EXCAVATING CONTRACTORS, AND ALL OTHER CONTRACTORS WITH PRIMARY OVERSIGHT ON INDIVIDUAL BUILDING LOTS OF THE TERMS AND CONDITIONS OF THE STORM WATER RULE 5, AND THE CONDITIONS AND STANDARDS OF THIS EROSION CONTROL PLAN, SCHEDULE FOR IMPLEMENTATION, AND THE CONSTRUCTION SITE EROSION CONTROL PLAN REPORT.
- INSTALL PERIMETER SILT FENCE.
- AFTER THE PERIMETER PRACTICES ARE INSTALLED, A MEETING WITH LOCAL GOVERNMENT DEPT. OF P&Z IS REQUIRED BEFORE ADDITIONAL CONSTRUCTION PROCEEDS
- BEGIN TOPSOIL REMOVAL TO STOCKPILE AREA AND ROUGH GRADE.
- BEGIN SEEDING AND MULCHING PROGRAM (TEMPORARY SEED ALL DISTURBED AREAS).
- IMPLEMENT SELF-MONITORING PROGRAM.
- INSTALL ADDITIONAL SILT FENCES OR OTHER SUCH MECHANISM AS REQUIRED.

CONSTRUCTION SEQUENCE

1. TEMPORARY OR PERMANENT SEED SITE PERIMETER.
2. BEGIN CONSTRUCTION OF STORMWATER SYSTEM AND DETENTION FACILITY THEN PROCEED WITH THE INSTALLATION OF EROSION CONTROL BLANKET AS INDICATED ON SHEET C4.0.
3. INSTALL PROPOSED STORMWATER QUALITY TREATMENT UNITS.
4. INSTALL RIPRAP PROTECTION FOR END SECTIONS AT PROPOSED DETENTION FACILITY.
5. INSTALL STORM AND OTHER UTILITIES. BEGIN ON OUTLET AND DOWNSTREAM STORM SEWERS ON THE EAST SIDE OF THE SITE, THEN PROCEED ONTO WEST THROUGH THE SITE.
6. INSTALL DANDY BAG INLET PROTECTION AS STORM INLETS ARE COMPLETED.
7. START BUILDING CONSTRUCTION.
8. ROUGH GRADE PARKING LOT AND ISLAND AREAS.
9. COMPLETE BUILDING.
10. FINAL GRADE, PERMANENT SEED, AND LANDSCAPE.
11. ONCE CONSTRUCTION IS COMPLETED AND THE SITE IS STABILIZED, THE CONTRACTOR WILL REMOVE ANY SEDIMENT FROM THE POND AND STABILIZE ANY DISTURBED AREAS OF THE POND.

EROSION CONTROL IMPLEMENTATION NOTES

UPON COMPLETION OF THE INITIAL SITE INSPECTION AND BEFORE ANY VEGETATION IS REMOVED FROM THE SITE, THE EROSION CONTROL PLAN SHALL BE IMPLEMENTED. THE PLAN SHALL BE CONTINUALLY MAINTAINED AND UPDATED AS NEEDED.

ALL EROSION CONTROL PRACTICES WILL BE INSTALLED UNDER THE GUIDANCE OF A PROFESSIONAL EXPERIENCED IN EROSION CONTROL. ALL OTHER NON-ENGINEERED EROSION CONTROL MEASURES INVOLVING VEGETATION WILL BE INSTALLED ACCORDING TO THE SPECIFICATIONS AND CRITERIA AS SET FORTH IN THE EROSION CONTROL PLAN.

IDENTIFY AND PROTECT ALL EXISTING VEGETATION DESIGNATED TO REMAIN.

RETAIN EXISTING VEGETATION WHEREVER POSSIBLE

ALL STOCKPILED TOPSOIL TO BE SALVAGED SHALL BE PERIMETER PROTECTED. RUNOFF FROM STOCKPILES WILL BE FILTERED THROUGH SILT FENCES AND THE SEDIMENT BASIN. STOCKPILES SHALL NOT INTERFERE WITH NATURAL DRAINAGE. THE STOCKPILES SHALL BE REDISTRIBUTED OVER THE SITE AND FINAL GRADED IMMEDIATELY PRIOR TO SEEDING.

LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.

THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.

SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN THE RECEIVING STREAM. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.

WASTES AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORMWATER RUNOFF. PROPER DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS IS REQUIRED.

SEDIMENT BEING TRACED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.

SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND REDISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.

IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.

ALL EXISTING STRUCTURES, FENCING, TREES AND ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF SITE. BURNING IS NOT ALLOWED ON-SITE.

ALL AREAS WHICH CAN BE REGRADED TO A FINAL STATE SHALL BE REVEGETATED WITH AN APPROVED SEED MIXTURE AND FERTILIZED AT THE RATES INDICATED AS PER THE SEED CHART (SHEET C4.1).

B3 CONSTRUCTION ENTRANCE LOCATION
SEE SHEET C4.0 FOR LOCATIONS; SEE SHEET C4.1 FOR DETAILS.

B4 SEDIMENT CONTROL MEASURES FOR SHEET FLOW AREAS
SILT FENCE, TEMPORARY AND PERMANENT SEEDING; SEE EROSION CONTROL PLAN SHEET C4.0 FOR LOCATIONS; SEE SHEET C4.1 FOR DETAILS.

B5 CONTROL MEASURES FOR CONCENTRATED FLOW AREAS
RIP RAP; SEE SHEET C4.0 FOR LOCATIONS; SEE C4.1 & C4.4 FOR DETAILS.

B6 INLET PROTECTION MEASURE LOCATIONS AND SPECIFICATIONS
DANDYBAG INLET PROTECTION SEE SHEET C4.0 FOR LOCATIONS; DETAILS ON SHEET C4.1

B7 RUNOFF CONTROL MEASURES
SILT FENCE: SEE PLAN SHEET C4.0; DETAILS SHEET C4.1 & C4.4

B8 STORM WATER OUTLET PROTECTION SPECIFICATIONS
RIP RAP AND EROSION CONTROL MAT; SEE SHEET C4.0 FOR LOCATIONS AND SHEET C4.1 FOR DETAILS.

B9 GRADE STABILIZATION STRUCTURES
SEEDING AND EROSION CONTROL MAT; SEE SHEET C4.0 FOR LOCATIONS AND SHEET C4.1 FOR DETAILS.

B10 CONSTRUCTION DETAILS FOR STORMWATER MEASURES
SEE EROSION CONTROL PLAN SHEET C4.0 FOR LOCATIONS AND SHEET C4.1 FOR DETAILS. (SILT FENCE TO BE NWSF-6 NON-WOVEN FABRIC OR AN APPROVED EQUAL.)

B11 TEMPORARY SURFACE STABILIZATION METHODS

1. ALL CONSTRUCTION METHODS AND MATERIALS MUST CONFORM TO CURRENT STANDARDS AND SPECIFICATIONS OF THE FEDERAL, STATE, COUNTY, CITY OR LOCAL REQUIREMENTS, WHICHEVER HAS JURISDICTION.
2. LAND ALTERATION WHICH STRIPS THE LAND OF VEGETATION, INCLUDING REGRADING, SHALL BE DONE IN A WAY THAT WILL MINIMIZE EROSION.
3. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.
4. SEDIMENT LADEN WATER SHALL BE DETAINED BY EROSION CONTROL PRACTICES AS NEEDED TO MINIMIZE SEDIMENTATION IN THE RECEIVING STREAM. NO STORM WATER SHALL BE DISCHARGED FROM THE SITE IN A MANNER THAT CAUSES EROSION AT THE POINT OF DISCHARGE.
5. WASTES AND UNUSED BUILDING MATERIALS SHALL NOT BE ALLOWED TO BE CARRIED FROM THE SITE BY STORMWATER RUNOFF. PROPER DISPOSAL OF ALL WASTES AND UNUSED BUILDING MATERIALS IS REQUIRED.
6. SEDIMENT BEING TRACED ONTO PUBLIC OR PRIVATE ROADWAYS SHALL BE MINIMIZED. CLEARING OF ACCUMULATED SEDIMENT SHALL NOT INCLUDE FLUSHING WITH WATER. CLEARED SEDIMENT SHALL BE RETURNED TO THE SITE FOR DISPOSAL.
7. SOIL WHICH HAS ACCUMULATED NEXT TO EROSION CONTROL DEVICES SHALL BE COLLECTED AND REDISTRIBUTED ON SITE AFTER EACH RAINFALL EVENT, AND AT LEAST ONCE A WEEK.
8. ALL EXISTING STRUCTURES, FENCING, TREES AND ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF OFF SITE. BURNING IS NOT ALLOWED ON-SITE.
9. SCHEDULE OF EARTHWORK ACTIVITIES:
   a) THE DURATION OF TIME WHICH AN AREA REMAINS EXPOSED SHALL BE KEPT TO A PRACTICAL MINIMUM. THE AREA SHALL BE STABILIZED SOON AS POSSIBLE. TEMPORARY VEGETATION OR MULCHING SHALL BE USED TO PROTECT EXPOSED AREAS IF PERMANENT VEGETATION CANNOT BE SEEDED WITHIN 14 DAYS OR ACTIVITY CEASES FOR MORE THAN 21 DAYS OR AS DIRECTED BY THE ENGINEER.
   b) PERMANENT AND FINAL VEGETATION AND STRUCTURAL EROSION CONTROL DEVICES SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADING OR AS SOON AS POSSIBLE.
   c) TEMPORARY SEEDING SHALL UTILIZE SEED SPECIES, APPLICATION RATES, AND DATES SET FORTH IN THE CHARTS ON SHEET C4.1.

B12 PERMANENT SURFACE STABILIZATION METHODS

1. AT THE PROPER TIME, WITH APPROVAL FROM THE OWNER, AND ONLY AFTER NOTIFYING LOCAL GOVERNMENT SEPT. OF P&Z, THE CONTRACTOR SHALL DISMANTLE THE REMAINING EROSION CONTROL ELEMENTS ONLY AS REQUIRED TO FINISH ALL GRADING. CONTRACTOR SHALL NOTIFY THE CITY OF GREENWOOD IN ADVANCE AND ARRANGE FOR THE LANDSCAPING CONTRACTOR TO FOLLOW UP IMMEDIATELY WITH REVEGETATION OF THE REMAINING AREAS.
2. CONTRACTOR SHALL REMOVE ANY UNSUITABLE MATERIAL FROM THE SITE LEFT FROM THE EROSION CONTROL MEASURES.
3. ANY BARE DISTURBED AREAS WILL BE GRADED, SEEDED AND MULCHED OR OTHERWISE REVEGETATED OR STABILIZED, AS PER THE EROSION CONTRL PLAN. PERMANENT SEEDING WILL BE ACCORDING TO THE SEED SPECIES, RATES AND DATES SHOWN IN THE CHARTS ON SHEET C4.1.
4. FINAL STABILIZATION WILL BE CONSIDERED ACHIEVED WHEN PERENNIAL VEGETATIVE COVER HAS A DENSITY OF SEVENTY PERCENT (70%) ON ALL UNPAVED AREAS OR AN EQUIVALENT PERMANENT STABILIZATION MEASURE HAS BEEN UTILIZED. IMPLEMENTATION AND MAINTENANCE WILL BE ACCORDING TO SECTIONS C2 AND C5 BELOW.

B13 MATERIAL HANDLING AND SPILL PREVENTION PLAN

1. THE PROPER MANAGEMENT AND DISPOSAL OF WASTES SHOULD BE PRACTICED ON SITE AT ALL TIMES TO REDUCE POLLUTION STORM WATER RUNOFF. HAZARDOUS WASTE SHOULD ALWAYS BE DISPOSED OF THROUGHA DESIGNATED HAZARDOUS WASTE MANAGEMENT OR RECYCLING FACILITY. HAZARDOUS WASTE SHOULD NOT BE DISPOSED OF WITH ORDINARY GARBAGE, OR POURED INTO THE SANITARY SEWER SYSTEM OR ONTO THE GROUND.
2. DESIGNATE A WASTE COLLECTION AREA ON-SITE THAT DOES NOT RECEIVE A SUBSTANTIAL AMOUNT OF RUNOFF FROM UPLAND AREAS AND DOES NOT DRAIN DIRECTLY INTO A WATER BODY.
3. KEEP PRODUCTS IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RE-SEALABLE, THEN ORIGINAL LABEL AND MATERIAL SAFETY DATA WILL BE RETAINED. IF A PRODUCT DOES NOT HAVE ITS ORIGINAL LABEL, LABEL IT YOURSELF IF YOU ARE SURE OF CONTENTS. MAKE SURE PRODUCTS ARE PROPERLY SEALED TO PREVENT LEAKS AND SPILLS AND STORED IN A WEATHER PROOF SELF CONTAINED AREA AWAY FROM HEAT, SPARKS AND FLAMES.
4. A PROGRAM FOR RECYCLING OR DISPOSAL OF MATERIALS ASSOCIATED WITH OR FROM THE PROJECT SITE SHALL BE ESTABLISHED. ALL RECYCLING CONTAINERS WILL BE CLEARLY LABELED.
5. ALL CONSTRUCTION ACTIVITIES TO BE MONITORED AND MAINTAINED BY THE CONTRACTOR. AS EACH NEW SUB-CONTRACTOR COMES ON-SITE, THE CONTRACTOR WILL CONDUCT AND DOCUMENT A MEETING TO ENSURE AWARENESS OF THE POLLUTANT PREVENTION PROGRAM. GUIDELINES FOR PROPER HANDLING, STORAGE AND DISPOSAL OF CONSTRUCTION SITE WASTES SHOULD BE POSTED IN STORAGE AND USE AREAS AND WORKERS SHOULD BE TRAINED IN THESE PRACTICES TO ENSURE EVERYONE IS KNOWLEDGEABLE ENOUGH TO PARTICIPATE.
6. IN AN EMERGENCY, THE CONTRACTOR WILL CALL 911. IN THE EVENT OF A SPILL THAT POSES NO IMMEDIATE THREAT, THE CONTRACTOR WILL CONTACT THE LOCAL FIRE DEPARTMENT AT (317)776-6336 AND IDEM EMERGENCY RESPONSE AT (888) 233-7745 WITHIN 24 HOURS OF THE SPILL. EMERGENCY PHONE NUMBERS AND PROCEDURES SHALL BE PROMINATELY DISPLAYED AT THE WORK SITE WHERE SPILLS MAY OCCUR, SUCH AS STAGING/REFUELING AREAS.
7. CLEAN UP SPILLS IMMEDIATELY. FOR HAZARDOUS MATERIALS FOLLOW CLEANUP INSTRUCTIONS ON THE PACKAGE. USE ABSORBENT MATERIAL SUCH AS SAWDUST OR KITTY LITTER TO CONTAIN THE SPILL. PROPER SAFETY MATERIALS SHOULD BE STORED ON SITE IN CASE OF ACCIDENT OR SPILL WHICH SHOULD INCLUDE BUT NOT LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THAT PURPOSE. SPILL AREAS SHOULD BE WELL VENTILATED.
8. DURING THE DEMOLITION PHASE OF CONSTRUCTION, PROVIDE EXTRA CONTAINERS AND SCHEDULE MORE FREQUENT PICKUPS FOR RECYCLABLES AND GARBAGE. COLLECT, REMOVE, AND DISPOSE OR ALL CONSTRUCTION SITE WASTES AT AUTHORIZED DISPOSAL AREAS. CONTACT LOCAL ENVIRONMENTAL AGENCY TO IDENTIFY DISPOSAL SITES OR AUTHORIZED CONTRACTORS.
9. CONSTRUCTION VEHICLES SHOULD BE INSPECTED FOR LEAKS DAILY AND REPAIRED IMMEDIATELY IN A SELF CONTAINED AREA DESIGNATED FOR VEHICLE MAINTENANCE AND REPAIR. THE VEHICLE MAINTENANCE AREA SHOULD BE CONDUCTED ON AN AREA THAT IS TO BECOME FUTURE PAVEMENT. THIS AREA WILL BE DESIGNED TO MINIMIZE CONTACT BETWEEN EQUIPMENT ACTIVITIES AND RAINFALL OR RUNOFF. SPILLS MUST BE CLEANED UP AND MATERIALS DISPOSED OF IMMEDIATELY.
10. CONTAINERS OR EQUIPMENT THAT MAY MALFUNCTION AND CAUSE LEAKS OR SPILLS SHOULD BE IDENTIFIED THROUGH REGULAR INSPECTION AND STORAGE OF USE AREAS. EQUIPMENT AND CONTAINERS SHOULD BE INSPECTED REGULARLY FOR LEAKS, CORROSION, SUPPORT OR FOUNDATION FAILURE, OR ANY OTHER SIGNS OF DETERIORATION AND SHOULD BE TESTED FOR SOUNDNESS. ANY FOUND TO BE DEFECTIVE SHOULD BE REPAIRED OR REPLACED IMMEDIATELY.

B14 MONITORING AND MAINTENANCE GUIDELINES

A TRAINED INDIVIDUAL SHALL PERFORM A WRITTEN EVALUATION OF THE PROJECT SITE:
- BY THE END OF THE NEXT BUSINESS DAY FOLLOWING EACH 1/2 STORM EVENT; AND
- A MINIMUM OF ONE (1) TIME PER WEEK.

THE EVALUATION WILL:
- ADDRESS THE MAINTENANCE OF EXISTING EROSION CONTROL MEASURES TO ENSURE PROPER FUNCTIONING; AND
- IDENTIFY ANY ADDITIONAL MEASURES NECESSARY TO MEET THE REQUIREMENTS OF THE EROSION CONTROL PLAN.

WRITTEN EVALUATION REPORTS INCLUDE:
- THE NAME OF THE INDIVIDUAL PERFORMING THE EVALUATION;
- THE DATE OF THE EVALUATION;
- PROBLEMS IDENTIFIED AT THE PROJECT SITE; AND
- DETAILS OR CORRECTIVE ACTIONS RECOMMENDED AND COMPLETED.

ALL WRITTEN EVALUATION REPORTS FOR THE PROJECT SITE WILL BE MAINTAINED BY THE CONSTRUCTION SUPERINTENDENT THROUGHOUT THE TERM OF THE PROJECT CONSTRUCTION AND MADE AVAILABLE TO THE TOWN OF FISHERS OR OTHER INSPECTING AUTHORITY WITHIN 48 HOURS OF A REQUEST.

MAINTENANCE OF SPECIFIC EROSION CONTROL MEASURES SHALL BE ACCORDING TO THE FOLLOWING:

SEEDING OF DISTURBED AREAS
1. DISTURBED AREAS WILL BE SEEDED AND MULCHED FOR TEMPORARY OR PERMANENT STABILIZATION AS PHASES OF THE PROJECT CONSTRUCTION ARE COMPLETED.
2. UN-VEGETATED AREAS SCHEDULED OR LIKELY TO BE LEFT INACTIVE FOR FIFTEEN (15) DAYS OR MORE WILL BE TEMPORARILY OR PERMANENTLY STABILIZED WITH MEASURES APPROPRIATE FOR THE SEASON TO MINIMIZE EROSION POTENTIAL.
3. SEEDED AREAS WILL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.

SILT FENCE MAINTENANCE REQUIREMENTS:
1. INSPECT THE SILT FENCE PERIODICALLY AND AFTER EACH STORM EVENT.
2. IF FENCE FABRIC TEARS, STARTS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED PORTION IMMEDIATELY.
3. REMOVE DEPOSITED SEDIMENT WHEN IT REACHES HALF THE HEIGHT OF THE FENCE AT ITS LOWEST POINT OR IS CAUSING THE FABRIC TO BULGE.
4. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEAN OUT.
5. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED, REMOVE THE FENCE AND SEDIMENT DEPOSITS, BRING THE DISTURBED AREA TO GRADE, AND STABILIZE.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE MAINTENANCE REQUIREMENTS:
1. INSPECT ENTRANCE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER STORM EVENTS OR HEAVY USE.
2. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
3. TOP DRESS WITH CLEAN STONE AS NEEDED.
4. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED IF THE WATER IS CONVEYED INTO A SEDIMENT TRAP OR BASIN.
5. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.

STORM WATER BASIN MAINTENANCE REQUIREMENTS
1. INSPECT THE STORM WATER BASIN AFTER EACH STORM EVENT. IMMEDIATELY REPAIR ANY EROSION AND PIPING HOLES.
2. THE NECESSITY FOR SEDIMENT REMOVAL WILL BE DETERMINED AFTER EACH EVENT.
3. REPLACE/REPAIR OUTLET RIPRAP AS REQUIRED AFTER EACH EVENT.
4. INSPECT VEGETATION, AND RE-SEED IF NECESSARY.

EROSION CONTROL BLANKET (SURFACE APPLIED) MAINTENANCE REQUIREMENTS
1. DURING VEGETATIVE ESTABLISHMENT, INSPECT AFTER STORM EVENTS FOR ANY EROSION BELOW THE BLANKET.
2. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE BLANKET COVERING IT, ADD SOIL, RE-SEED THE AREA, AND RE-LAY AND STAPLE THE BLANKET.
3. AFTER VEGETATIVE ESTABLISHMENT, CHECK THE TREATED AREA PERIODICALLY AND MAINTAIN AS PER CHART UNDER SECTION C2 SHEET 4.1 FOR DRY SWALE.

B15 EROISION AND SEDIMENT CONTROL SPECIFICATIONS FOR INDIVIDUAL BUILDING LOTS
SEE DETAIL SHEET C4.1

EROSION CONTROL PLAN
POST-CONSTRUCTION COMPONENT (Section C)

C1 POTENTIAL POLLUTANT SOURCES FROM PROPOSED LAND USE

THE GREATEST AMOUNT OF POST CONSTRUCTION POLLUTANTS EXPECTED FROM THIS PROJECT WILL COME FROM THE VEHICLES THAT UTILIZE THE SITE. POTENTIAL POLLUTANTS FROM VEHICLES INCLUDE: GREASE, OIL, GASOLINE, DIESEL, ANTIFREEZE, BRAKE FLUID, METALS, RUBBER FRAGMENTS AND OTHER HYDROCARBONS. ALSO SAND AND GRAVEL FROM ROADWAY SURFACES AND ROAD WEATHER TREATMENTS ARE ASSUMED. BACTERIA AND OTHER BIOLOGICAL AGENTS FROM DUMPSTER AREAS AND LITTERING ARE ALSO CONSIDERED POTENTIAL POLLUTANTS.

FINAL LANDSCAPING AND SEEDING WILL BE DONE AFTER FINAL GRADING.

WEEKLY PARKING LOT CLEANING AND DAILY LITTER CLEAN UP WILL BE PERFORMED.

FERTILIZING WILL BE MINIMAL SINCE THERE IS VERY LITTLE TURF ON THE SITE. THE EXTENSIVE LANDSCAPE PLANTINGS WERE CHOSEN FOR THE LOW DEPENDENCY UPON FERTILIZERS AND PESTICIDES. THEY ALSO REQUIRE VERY LITTLE IRRIGATION SO TO MINIMIZE THE FERTILIZER AND PESTICIDE RUNOFF FROM THE SITE.

C2 SEQUENCE OF EROSION CONTROL MEASURES IMPLEMENTATION

- AFTER CONSTRUCTION AND FINAL GRADING, LANDSCAPE AND PERMANENTLY STABILIZE ALL DISTURBED SITES, INCLUDING BORROW AND DISPOSAL AREAS. TEMPORARY FACILITIES SHALL BE REMOVED ONLY AFTER ALL DISTURBED AREAS ARE STABILIZED.
- AQUA-SWIRL UNITS SHALL BE INSTALLED WITH STORM FACILITIES, SEE O&M MANUAL SEPERATE FROM THESE PLANS FOR MAINTENANCE

C3 PROPOSED STORMWATER QUALITY MEASURES

- AQUA-SWIRL UNITS (NOT REQUIRED FOR THIS PROJECT) SHALL BE INSTALLED WITH STORM FACILITIES,
- SEE O&M MANUAL SEPARATE FROM THESE PLANS FOR MAINTENANCE

C4 CONSTRUCTION DETAILS AND SPECIFICATIONS
SEE DETAILS SHEET C4.1

C5 MAINTENANCE GUIDELINES FOR STORMWATER MEASURES
SEE CHART DETAIL SEE SHEET C4.1
ESTIMATED START: SEPTEMBER 2, 2021
ESTIMATED COMPLETION OF SITE DEVELOPMENT: SEPTEMBER 2, 2022

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REVISIONS

SWPPP NOTES
Hillview Veterinary Clinic, LLC
1761 THORNBURG LANE, FRANKLIN, IN
NEEDHAM TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C4,2-SWPPP.DWG
DATE: 08.30.2021
PROJ. NO.: 21.018
DRAWN BY: B,OTT
SURVEYED BY: B.OTT
SCALE: ~

SWPPP

SHEET NO.:
C4.2

SURFACE STABILIZATION

Mulching

Mulching *is the application of plant residues/ materials to enhance and protect vegetative establishment and minimize erosion potential.*

Purpose

- To prevent erosion by protecting the soil from wind and water impact.
- To provide temporary surface stabilization.
- To prevent soil from crusting.
- To conserve soil moisture, moderate soil temperature, and promote seed germination and seedling growth.

Note: **This measure should not be used in storm water runoff channels or areas where concentrated flow is attempted.**

Specifications

Materials

Table 1. Mulch Specifications

Material[1]	Rate per Acre	Comments
Straw or hay	2 tons	Should be dry, free of undesirable seeds. Spread by hand or machine. Must be crimped or anchored (see *Table 2*).
Wood fiber or cellulose	1 ton	Apply with a hydraulic mulch machine and use with tacking agent.

[1] Mulching is not recommended in concentrated flows. Consider erosion control blankets or other stabilization methods.

MULCHING

Coverage

The mulch should have a uniform density of at least 75 percent over the soil surface.

Anchoring

Table 2. Mulch Anchoring Methods

Anchoring Method[1]	How to Apply
Mulch anchoring tool or farm disk (dull, serrated, and blades set straight)	Crimp or punch the straw or hay two to four inches into the soil. Operate machinery on the contour of the slope.
Cleating with dozer tracks	Operate dozer up and down slope to prevent formation of rills by dozer cleats.
Wood hydromulch fibers	Apply according to manufacturer's recommendations.
Synthetic tackifiers, binders, or soil stabilizers	Apply according to manufacturer's recommendations.
Netting (synthetic or biodegradable material)	Install netting immediately after applying mulch. Anchor netting with staples. Edges of netting strips should overlap with each up-slope strip overlapping four to six inches over the adjacent down-slope strip. Best suited to slope applications. In most instances, installation details are site specific, so manufacturer's recommendations should be followed.

[1] All forms of mulch must be anchored to prevent displacement by wind and/or water.

Application

1. Apply mulch at the recommended rate shown in Table 1.
2. Spread the mulch material uniformly by hand, hayfork, mulch blower, or hydraulic mulch machine. After spreading, no more than 25 percent of the ground should be visible.
3. Anchor straw or hay mulch immediately after application. The mulch can be anchored using one of the methods listed below:
   a. Crimp with a mulch anchoring tool, a weighted farm disk with dull serrated blades set straight, or track cleats of a bulldozer,
   b. Apply hydraulic mulch with short cellulose fibers,
   c. Apply a liquid tackifier, or
   d. Cover with netting secured by staples.

MULCHING

Maintenance

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for erosion or movement of mulch; repair damaged areas, reseed, apply new mulch and anchor the mulch in place.
- Continue inspections until vegetation is firmly established.
- If erosion is severe or recurring, use erosion control blankets or other more substantial stabilization methods to protect the area.

OUTLET PROTECTION & GRADE STABILIZATION

Energy Dissipater (Outlet Protection)

An ***energy dissipater (outlet protection)*** *is an erosion control measure consisting of riprap placed at the outlet end of culverts, conduits, channels, etc.*

Purpose

To prevent erosion at the outlet of a channel or conduit by reducing the velocity of storm water flow and dissipating its energy.

Specifications

Note: **Designed by a qualified individual/professional engineer. Additional design considerations will be required when discharge velocities are very high or tailwater conditions are very low.**

Capacity:

Peak runoff from a 10-year frequency, 24-hour storm event or the design discharge of the water conveyance structure, whichever is greater.

Maximum Velocity

Ten feet per second.

Tailwater Depth

- Determined immediately below the structure outlet.
- Based on design discharge plus other contributing flows.

Apron

- Length and width determined according to tailwater conditions.

ENERGY DISSIPATER (OUTLET PROTECTION)

- Aligned straight with channel flow. If a curve is necessary to align the apron with the receiving stream, locate the curve in the upstream section of the apron.
- Plunge pool (used with higher velocity flows).
- Thickness
  - 1.2 times the maximum stone diameter for a d_{50} stone size of 15 inches or larger.
  - 1.5 times the maximum stone diameter for a d_{50} stone size of 15 inches or less.

Table 1. Sizing for Flow Dissipaters at Culvert Pipe Outlets[1]

Pipe Size	Average Riprap Diameter	Apron Width[2]	Apron Length[3]
8 in.	3 in.	2 to 3 ft.	5 to 7 ft.
12 in.	5 in.	3 to 4 ft.	6 to 12 ft.
18 in.	8 in.	4 to 6 ft.	8 to 18 ft.
24 in.	10 in.	6 to 8 ft.	12 to 22 ft.
30 in.	12 in.	8 to 10 ft.	14 to 28 ft.
36 in.	14 in.	10 to 12 ft.	16 to 32 ft.

[1] For larger or higher flows consult a registered engineer.
[2] Apron width at the narrow end of apron (pipe or channel outlet).
[3] Select length taking into consideration the low flow (no pressure head) or high flow (pressure head) conditions of the culvert pipe.

Materials

- Riprap
  - Hard, angular, highly weather resistant.
  - Specific gravity of at least 2.5.
  - Size and gradation that will withstand velocities of storm water discharge flow design.
  - Well-graded mixture of stone with 50 percent of the stone pieces, by weight, larger than the d_{50} size and the diameter of the largest stone equal to 1.5 times the d_{50} size.

Note: **Concrete, gabion baskets, grouted riprap, interlocking concrete blocks, cabled concrete, and turf reinforcement products are alternative options to riprap.**

- Geotextile fabric or well-graded aggregate [INDOT CA No. 9, 11, or 12 (see Appendix D)].

ENERGY DISSIPATER (OUTLET PROTECTION)

Installation

1. Divert surface water runoff around the structure during construction so that the site can be properly dewatered for foundation preparation.
2. Excavate foundation and apron area subgrades below design elevation to allow for thickness of the filter medium and riprap.
3. Compact any fill used in subgrade preparation to the density of surrounding undisturbed soil material.
4. Smooth subgrade enough to protect geotextile fabric from tearing.
5. Place geotextile fabric or aggregate bedding material (for stabilization and filtration) on the compacted and smoothed foundation.
6. Install riprap to the lines and elevations shown in the construction plans. Blend riprap smoothly to surrounding grade. If the channel is well defined, extend the apron across the channel bottom and up the channel banks to an elevation of six inches above the maximum tailwater depth or to the top of the bank, whichever is less.
7. If geotextile fabric tears when placing riprap, repair immediately by laying and stapling a piece of fabric over damaged area, overlapping the undamaged areas by at least 12 inches.
8. Construct a small plunge pool within the outlet apron. (Riprap aprons must be level with or slightly lower than the receiving channel and should not produce an overfall or restrict flow of the water conveyance structure.)

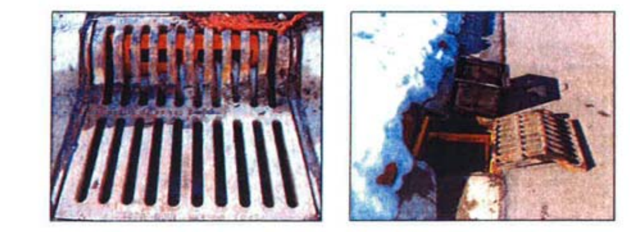
Maintenance

- Inspect within 24 hours of a rain event and at least once every seven calendar days.
- Inspect for stone displacement; replace stones ensuring placement at finished grade.
- Check for erosion or scouring around sides of the apron; repair immediately.
- Check for piping or undercutting; repair immediately.

Permanent CURB & PAVED AREA INLET PROTECTION

Insert (Basket) Curb Inlet Protection

Insert (basket) curb inlet protection *is a* permanent *sediment control measure consisting of a metal frame or basket that is used to support a geotextile fabric. The system is installed under the storm sewer grate.*



Purpose

To minimize sediment from entering the storm sewer system while allowing runoff to enter the storm sewer system in the event of excessive storm events. This measure traps sediment associated with small storm events below the grade of the paved area. This measure does not place an obstruction in the street to trap sediment and is especially conducive to stages of construction when the public has access to the project site.

Note: **This measure should be used in conjunction with other sediment control measures.**

Specifications

Contributing Drainage Area:

One-quarter acre maximum.

Capacity

Runoff from a two-year frequency, 24-hour storm event entering a storm drain without bypass flow.

SEDIMENT BARRIERS & FILTERS

Silt Fence

A ***silt fence*** *is a temporary barrier of entrenched geotextile fabric stretched across and attached to supporting posts and installed on the contour to intercept and treat sediment-laden storm water runoff from small, unvegetated drainage areas.*

Purpose

To trap sediment from small, disturbed areas by reducing the velocity of sheet flow. Silt fences capture sediment by ponding water to allow deposition, not by filtration.

Note: **Silt fence <u>is not</u> recommended for use as a diversion and should not be used across a stream, channel, ditch, swale, or anywhere that concentrated flow is anticipated.**

Specifications

Drainage Area

- Limited to one-quarter acre per 100 linear feet of fence.
- Further restricted by slope steepness (see Table 1).

Effective Life

Six months (maximum).

Location

- Installed parallel to the slope contour.
- Minimum of 10 feet beyond the toe of the slope to provide a broad, shallow sediment pool.
- Accessible for maintenance (removal of sediment and silt fence repair).

SILT FENCE

Spacing

Table 1. Slope Steepness Restrictions

Percent Slope		Maximum Distance
< 2%	< 50:1	100 feet
2% – 5%	50:1 to 20:1	75 feet
5% – 10%[1]	20:1 to 10:1	50 feet
10% – 20%[1]	10:1 to 5:1	25 feet
> 20%[1]	> 5:1	15 feet

[1] Consider other alternatives.

Note: Multiple rows of silt fence are not recommended on the same slope.

Trench

- Depth – eight inches minimum.
- Width – four inches minimum.
- After installing fence, backfill with soil material and compact (to bury and anchor the lower portion of the fence fabric).

Note: **An alternative to trenching is to use mechanical equipment to plow in the silt fence.**

Materials and Silt Fence Specifications

- Fabric – woven or non-woven geotextile fabric meeting specified minimums outlined in Table 2.

SILT FENCE

Table 2. Geotextile Fabric Specifications for Silt Fence (minimum)

Physical Property	Woven Geotextile Fabric	Non-Woven Geotextile Fabric
Filtering efficiency	85%	85%
Textile strength at 20% elongation Standard strength Extra strength	 30 lbs. per linear inch 50 lbs. per linear inch	 50 lbs. per linear inch 70 lbs. per linear inch
Slurry flow rate	0.3 gal./min./square feet	4.5 gal./min./square feet
Water flow rate	15 gal./min./square feet	220 gal./min./square feet
UV resistance	70%	85%
Post spacing	7 feet	5 feet

Note: Silt fences can be purchased commercially.

- Height – a minimum of 18 inches above ground level (30 inches maximum).
- Reinforcement – fabric securely fastened to posts with wood lathe.
- Support Posts
  - 2 x 2 inch hardwood posts. Steel fence posts may be substituted for hardwood posts (steel posts should have projections for fastening fabric).
  - Spacing
    - Eight feet maximum if fence is supported by wire mesh fencing.
    - Six feet maximum for extra-strength fabric without wire backing.

Installation

Prefabricated silt fence (see Exhibits 1, 2, and 3)

1. Lay out the location of the fence so that it is parallel to the contour of the slope and at least 10 feet beyond the toe of the slope to provide a sediment storage area. Turn the ends of the fence up slope such that the point of contact between the ground and the bottom of the fence end terminates at a higher elevation than the top of the fence at its lowest point (see Exhibit 1).
2. Excavate an eight-inch deep by four-inch wide trench along the entire length of the fence line (see Exhibit 2). Installation by plowing is also acceptable.
3. Install the silt fence with the filter fabric located on the up-slope side of the excavated trench and the support posts on the down-slope side of the trench.

SILT FENCE

4. Drive the support posts at least 18 inches into the ground, tightly stretching the fabric between the posts as each is driven into the soil. A minimum of 12 inches of the filter fabric should extend into the trench. (If it is necessary to join the ends of two fences, use the wrap joint method shown in Exhibit 3.)
5. Lay the lower four inches of filter fabric on the bottom of the trench and extend it toward the up-slope side of the trench.
6. Backfill the trench with soil material and compact it in place.

Note: **If the silt fence is being constructed on-site, attach the filter fabric to the support posts (refer to Tables 1 and 2 for spacing and geotextile specifications) and attach wooden lathe to secure the fabric to the posts. Allow for at least 12 inches of fabric below ground level. Complete the silt fence installation, following steps 1 through 6 above.**

Maintenance

- Inspect within 24 hours of a rain event and at least once every seven calendar days.
- If fence fabric tears, starts to decompose, or in any way becomes ineffective, replace the affected portion immediately. Note: **All repairs should meet specifications as outlined within this measure.**
- Remove deposited sediment when it is causing the filter fabric to bulge or when it reaches one-half the height of the fence at its lowest point. When contributing drainage area has been stabilized, remove the fence and sediment deposits, grade the site to blend with the surrounding area, and stabilize.

SURFACE STABILIZATION

Erosion Control Blanket

An ***erosion control blanket*** *is a biodegradable, organic or synthetic mulch incorporated with a biodegradable, photodegradable, or permanent polypropylene, natural fiber, or similar netting material. It is an alternative to mulch and normally used on slopes and in concentrated flow channels.*

Purpose

- To prevent erosion by protecting the soil from rainfall impact, overland water flow, concentrated runoff, or wind.
- To provide temporary surface stabilization.
- To anchor mulch in critical areas, including slopes and concentrated flow conveying systems.
- To reduce soil crusting.
- To conserve soil moisture and increase seed germination and seedling growth.

Specifications

Effective Life

The functional life of an erosion control blanket is dependent on the materials used.

Anchoring

Staples, pins or stakes used to prevent movement or displacement of blanket. (Follow manufacturer's recommendations for specific applications.)

Materials

- Organic (straw, excelsior, woven paper, coconut fiber, etc.) or synthetic mulch incorporated with a polypropylene, natural fiber or similar netting material. (The netting may be biodegradable, photodegradable or permanent.)

EROSION CONTROL BLANKET

Note: **Some erosion control blanket nettings may pose a threat to certain species of wildlife if they become entangled in the netting matrix.**

- Six to 12-inch staples, pins, or stakes.

Installation

1. Select the type and weight of erosion control blanket to fit the site conditions (e.g., slope, channel, flow velocity) per the manufacturer's specifications.
2. Prepare the seedbed, add soil amendments, and permanently seed (see **Permanent Seeding** on page 35) the area immediately following seedbed preparation.
3. Lay erosion control blankets on the seeded area so that they are in continuous contact with the soil with each up-slope or up-stream blanket overlapping the down-slope or down-stream blanket by at least eight inches, or follow manufacturer's recommendations.
4. Tuck the uppermost edge of the upper blankets into a check slot (slit trench), backfill with soil and tamp down. In certain applications, the manufacturer may require additional check slots at specific locations down slope from the uppermost edge of the upper blankets.
5. Anchor the blankets in place by driving staples, pins, or stakes through the blanket and into the underlying soil. Follow an anchoring pattern appropriate for the site conditions and as recommended by the manufacturer.

Maintenance

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for erosion or displacement of the blanket.
- If any area shows erosion, pull back that portion of the blanket covering the eroded area, add soil and tamp, reseed the area, replace and staple the blanket.

INSERT (BASKET) CURB INLET PROTECTION

Location

- At curb inlets on paved roads and parking lots.
- Down grade from construction activities (e.g., individual home sites).

Materials

- Metal frame or basket with a top width and length such that the frame fits into the inlet. (The frame is supported by the structural integrity of the storm sewer.)
- The metal frame or geotextile should be designed with a bypass to allow storm water to flow into the storm sewer system during excessive storm events.
- The system should be designed for ease of maintenance.
- Geotextile fabric.

Table 1. Geotextile Fabric Specifications

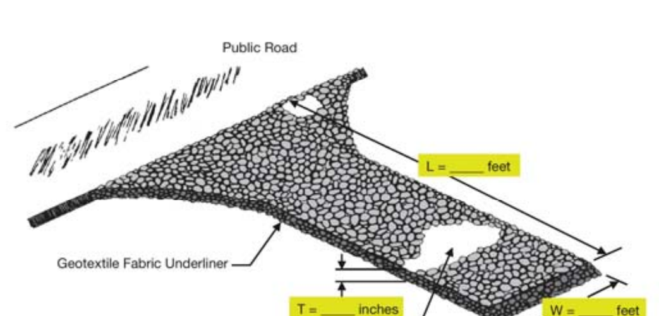
Physical Property	Woven	Non-Woven
Filtering Efficiency	85%	85%
UV Resistance (inhibitors and stabilizers to ensure six month minimum life at temperatures of 0° F to 120° F)	70%	85%
Tensile Strength at 20% Elongation: Standard Strength Extra Strength	 30 lbs./linear inch 50 lbs./linear inch	 50 lbs./linear inch 70 lbs./linear inch
Slurry Flow Rate	0.3 gal./min./sq. ft.	4.5 gal./min./sq. ft.
Water Flow Rate	15 gal./min./sq. ft.	220 gal./min./sq. ft.

Installation

1. Remove the storm sewer grate and place the frame into the grate opening.
2. Place geotextile fabric into the frame and secure according to the manufacturer's recommendations.
3. Replace the storm sewer grate.

TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD (LARGE SITES—TWO ACRES OR LARGER)

Temporary Construction Ingress/Egress Pad
Plan View Worksheet
(large sites—two acres or larger)



L = Ingress/Egress Pad Length
W = Ingress/Egress Pad Width
T = Aggregate Thickness

(Note: For minimum dimensions, see the "Specifications" section of this measure.)

Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

TEMPORARY CONSTRUCTION INGRESS/EGRESS PAD (LARGE SITES—TWO ACRES OR LARGER)

Materials

- One to two and one-half inch diameter washed aggregate [Indiana Department of Transportation Course Aggregate No. 2 (see Appendix D)].
- One-half to one and one-half inch diameter washed aggregate [INDOT CA No. 53 (see Appendix D)].
- Geotextile fabric underlayment (see Appendix C) (used as a separation layer to prevent intermixing of aggregate and the underlying soil material and to provide greater bearing strength when encountering wet conditions or soils with a seasonal high water table limitation).

Installation

1. Remove all vegetation and other objectionable material from the foundation area.
2. Grade foundation and crown for positive drainage. If the slope of the construction entrance is toward a public road and exceeds two percent, construct an eight inch high diversion ridge with a ratio of 3-to-1 side slopes across the foundation area about 15 feet from the entrance to divert runoff away from the road (see Temporary Construction Ingress/Egress Pad Cross-Section View Worksheet).
3. Install a culvert pipe under the pad if needed to maintain proper public road drainage.
4. If wet conditions are anticipated, place geotextile fabric on the graded foundation to improve stability.
5. Place aggregate (INDOT CA No. 2) to the dimensions and grade shown in the construction plans, leaving the surface smooth and sloped for drainage.
6. Top-dress the first 50 feet adjacent to the public roadway with two to three inches of washed aggregate (INDOT CA No. 53) [optional, used primarily where the purpose of the pad is to keep soil from adhering to vehicle tires].
7. Where possible, divert all storm water runoff and drainage from the ingress/egress pad to a sediment trap or basin.

Maintenance

- Inspect daily.
- Reshape pad as needed for drainage and runoff control.
- Top dress with clean aggregate as needed.
- Immediately remove mud and sediment tracked or washed onto public roads.
- Flushing should only be used if the water can be conveyed into a sediment trap or basin.

SURFACE STABILIZATION

Mulching

Mulching *is the application of plant residues/ materials to enhance and protect vegetative establishment and minimize erosion potential.*

Purpose

- To prevent erosion by protecting the soil from wind and water impact.
- To provide temporary surface stabilization.
- To prevent soil from crusting.
- To conserve soil moisture, moderate soil temperature, and promote seed germination and seedling growth.

Note: **This measure should not be used in storm water runoff channels or areas where concentrated flow is attempted.**

Specifications

Materials

Table 1. Mulch Specifications

Material[1]	Rate per Acre	Comments
Straw or hay	2 tons	Should be dry, free of undesirable seeds. Spread by hand or machine. Must be crimped or anchored (see *Table 2*).
Wood fiber or cellulose	1 ton	Apply with a hydraulic mulch machine and use with tacking agent.

[1] Mulching is not recommended in concentrated flows. Consider erosion control blankets or other stabilization methods.

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MULCHING

Coverage

The mulch should have a uniform density of at least 75 percent over the soil surface.

Anchoring

Table 2. Mulch Anchoring Methods

Anchoring Method[1]	How to Apply
Mulch anchoring tool or farm disk (dull, serrated, and blades set straight)	Crimp or punch the straw or hay two to four inches into the soil. Operate machinery on the contour of the slope.
Cleating with dozer tracks	Operate dozer up and down slope to prevent formation of rills by dozer cleats.
Wood hydromulch fibers	Apply according to manufacturer's recommendations.
Synthetic tackifiers, binders, or soil stabilizers	Apply according to manufacturer's recommendations.
Netting (synthetic or biodegradable material)	Install netting immediately after applying mulch. Anchor netting with staples. Edges of netting strips should overlap with each up-slope strip overlapping four to six inches over the adjacent down-slope strip. Best suited to slope applications. In most instances, installation details are site specific, so manufacturer's recommendations should be followed.

[1] All forms of mulch must be anchored to prevent displacement by wind and/or water.

Application

1. Apply mulch at the recommended rate shown in Table 1.
2. Spread the mulch material uniformly by hand, hayfork, mulch blower, or hydraulic mulch machine. After spreading, no more than 25 percent of the ground should be visible.
3. Anchor straw or hay mulch immediately after application. The mulch can be anchored using one of the methods listed below:
   a. Crimp with a mulch anchoring tool, a weighted farm disk with dull serrated blades set straight, or track cleats of a bulldozer,
   b. Apply hydraulic mulch with short cellulose fibers,
   c. Apply a liquid tackifier, or
   d. Cover with netting secured by staples.

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MULCHING

Maintenance

- Inspect within 24 hours of each rain event and at least once every seven calendar days.
- Check for erosion or movement of mulch; repair damaged areas, reseed, apply new mulch and anchor the mulch in place.
- Continue inspections until vegetation is firmly established.
- If erosion is severe or recurring, use erosion control blankets or other more substantial stabilization methods to protect the area.

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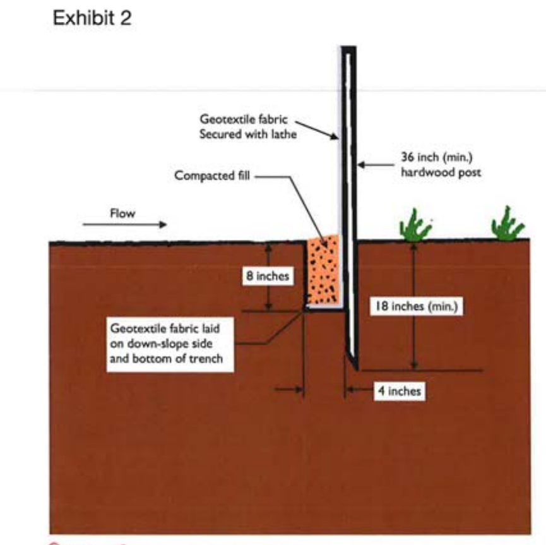
SILT FENCE

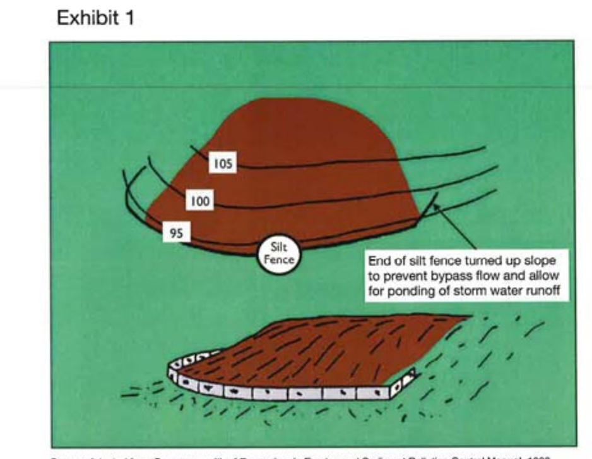
Exhibit 2



Silt Fence must be
NWSF – 6
NON-Woven Fabric.
OR
An approved equal.

SILT FENCE

Exhibit 1



Source: Adapted from Commonwealth of Pennsylvania Erosion and Sediment Pollution Control Manual, 1990

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BRADLEY P. OTT
REGISTERED
No PE0200097
STATE OF INDIANA
PROFESSIONAL ENGINEER

[illegible]

REVISIONS

SWPPP SPECIFICATIONS
Hillview Veterinary Clinic, LLC
1761 THORNBURG LANE, FRANKLIN, IN
NEEDHAM TOWNSHIP, JOHNSON COUNTY, INDIANA

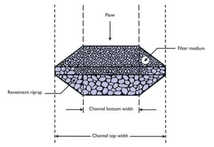
DRAWING: C4,3–SWPPP.DWG
DATE: 08.30.2021
PROJ. NO.: 21.018
DRAWN BY: B.OTT
SURVEYED BY: B.OTT
SCALE: ~

SWPPP

SHEET NO.:
C4.3

ROCK CHECK DAM

Exhibit 2

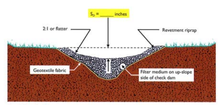


B5 CONTROL MEASURES FOR CONCENTRATED FLOW AREAS

B7 RUNOFF CONTROL MEASURES

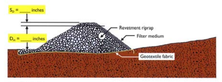
ROCK CHECK DAM

Rock Check Dam Worksheet



S_s = Spillway Depth

NOTE: For minimum dimensions see the "Specifications" section of this measure.



D_c = Dam Height
S_s = Spillway Depth

NOTE: For minimum dimensions see the "Specifications" section of this measure.

Source: Adapted from North Carolina Erosion and Sediment Control Planning and Design Manual, 1993

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REVISIONS

SWPPP NOTES

Hillview Veterinary Clinic, LLC
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NEEDHAM TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C4.4-SWPPP.DWG
DATE: 08.30.2021
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SWPPP

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C4.4

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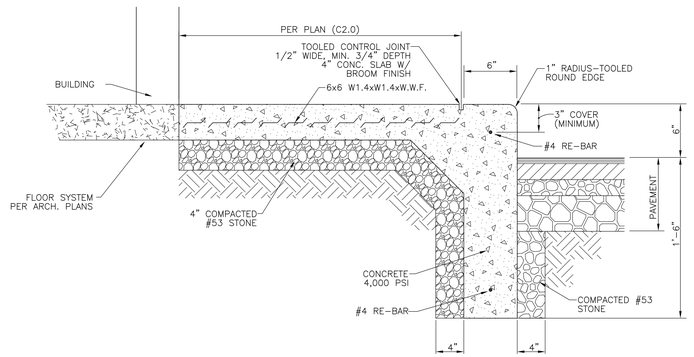
REVISIONS

LIGHT DUTY ASPHALT PAVEMENT SECTION (03 / C7.0)

NOT TO SCALE



COMBINED CURB & WALK DETAIL (07 / C7.0)

NOT TO SCALE

DETAILS

Hillview Veterinary Clinic, LLC

1761 THORNBURG LANE, FRANKLIN, IN

NEEDHAM TOWNSHIP, JOHNSON COUNTY, INDIANA

DRAWING: C7.0-DET.DWG
DATE: 08.30.2021
PROJ. NO.: 21.018
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SURVEYED BY: B.OTT
SCALE: ~

DETAILS

SHEET NO.:

C7.0

BENCHMARKS:

FRANKLIN 1920 NO 1 1974 = 730.55 (NAVD 1988)
REFERENCE MARK 1 IS A STANDARD DISK STAMPED FRANKLIN 1920 NO 1 1974 SET IN A DRILL HOLE IN THE TOP AND SOUTHWEST CORNER OF THE CONCRETE BASE OF RAILROAD CROSSING LIGHT , 24 FEET NORTH OF THE CENTERLINE OF MADISON STREET AND 16 FEET EAST OF THE EAST RAIL OF THE RAILROAD BETWEEN CROWELL AND DEPOT STREETS.

TBM#1 = 735.24
REBAR WITH YELLOW PLASTIC CAP MARKED FECO FOUND 4 INCHES DOWN AT THE NORTHWEST CORNER OF LOT 5.

TBM#2 = 734.64
MAG NAIL DOUND AT THE NORTH EDGE OF THE SIDEWALK AT THE SOUTHWEST CORNER OF LOT 5.

UTILITY STATEMENT:

The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although the surveyor does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.

STREET TREES: (1 tree per 35 ft of frontage required)

Total street frontage = 500.63 (249.13+128.29+75.62+47.59)

÷35 = 14.3 15 trees required
9 existing trees provided

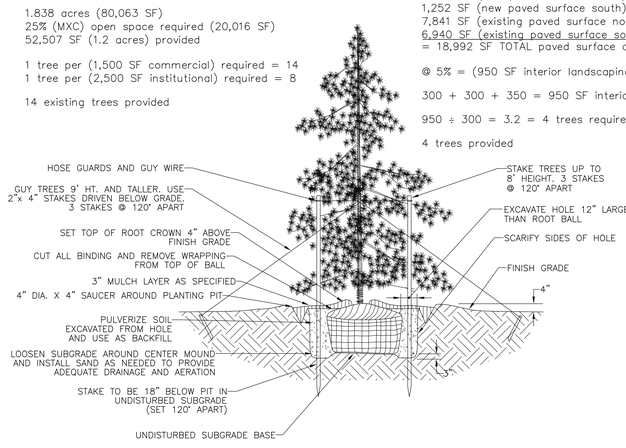
~

SITE INTERIOR (MXC):

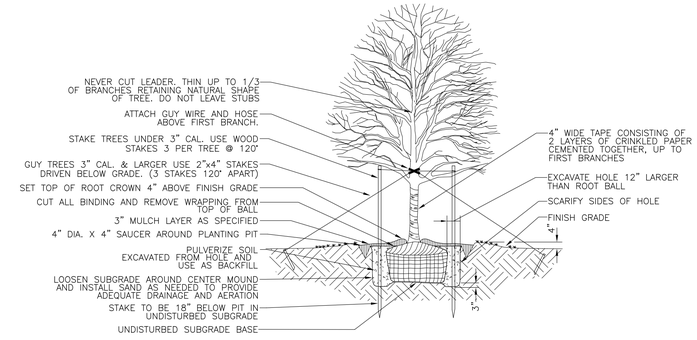
1.838 acres (80,063 SF)
25% (MXC) open space required (20,016 SF)
52,507 SF (1.2 acres) provided

1 tree per (1,500 SF commercial) required = 14
1 tree per (2,500 SF institutional) required = 8

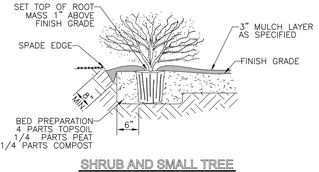
14 existing trees provided



EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



SHADE TREE PLANTING DETAIL
NOT TO SCALE



SHRUB AND SMALL TREE PLANTING DETAIL
NOT TO SCALE

Know what's below. Call before you dig.

Scale 1" = 20'

PARKING LOT/DRIVE PERIMETER:

1 tree required per 80 LF adjacent to right of way
1 shrub required per 10 LF adjacent to right of way

91 + 40 = 131 LF adjacent to right of way

÷ 80 LF = 1.6 = 2 trees required
÷ 10 LF = 13 shrubs required

4 existing + 2 new = 6 trees provided
13 shrubs provided

~

PARKING LOT INTERIOR:

5% of paved area required plus 1 tree per 300 SF required

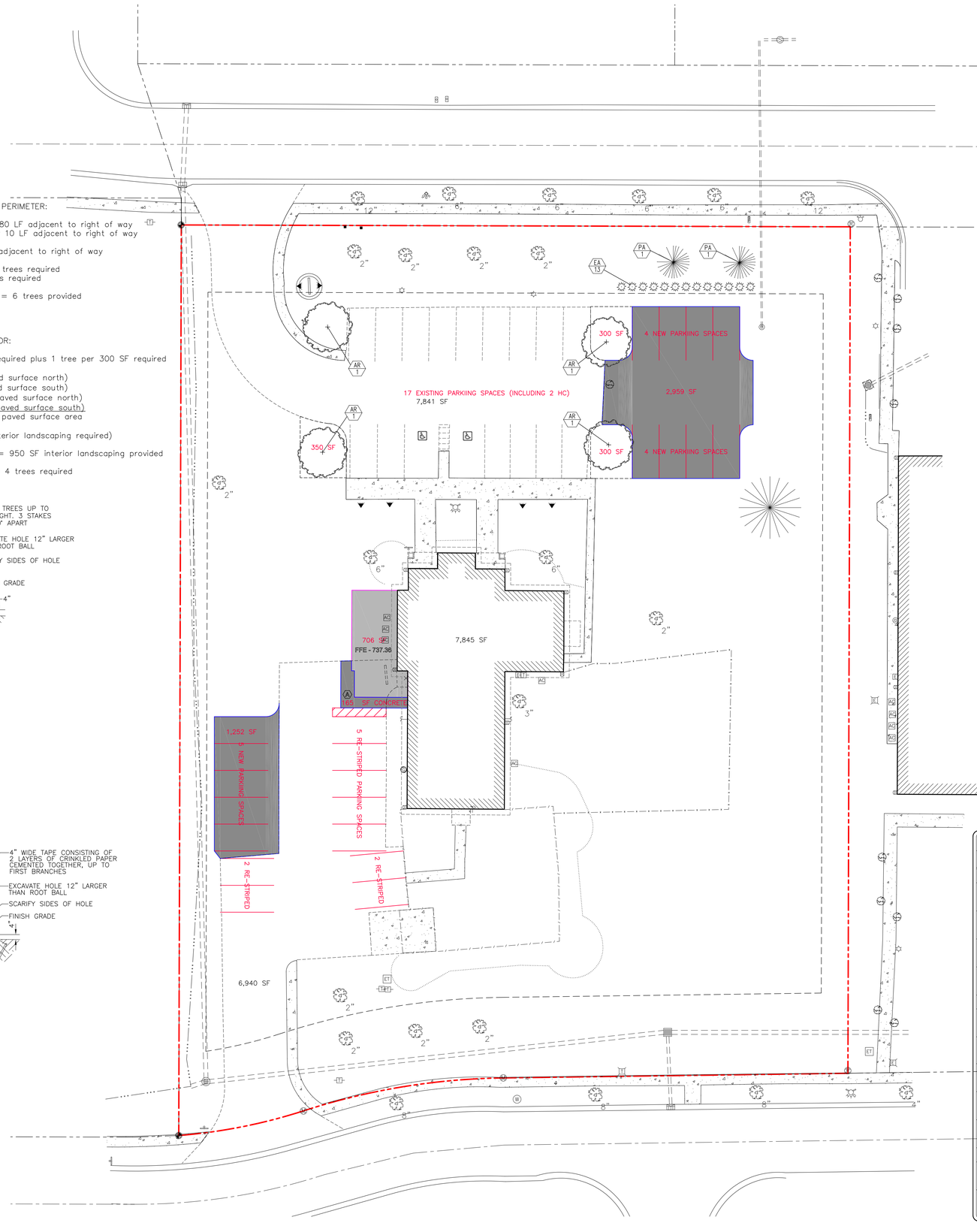
2,959 SF (new paved surface north)
1,252 SF (new paved surface south)
7,841 SF (existing paved surface north)
6,940 SF (existing paved surface south)
= 18,992 SF TOTAL paved surface area

@ 5% = (950 SF interior landscaping required)

300 + 300 + 350 = 950 SF interior landscaping provided

950 ÷ 300 = 3.2 = 4 trees required

4 trees provided



LANDSCAPE NOTES

1. THE CONTRACTOR SHALL LOCATE AND VERIFY THE EXISTENCE OF ALL UTILITIES PRIOR TO STARTING WORK.
2. THE CONTRACTOR SHALL SUPPLY ALL PLANT MATERIALS IN QUALITY AND QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING AS SHOWN ON DRAWINGS.
3. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE "AMERICAN ASSOCIATION OF NURSERY STOCK, ANSI Z60.1–1996, OR CURRENT PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
4. NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN FINISHED AND APPROVED.
5. ALL PLANTS SHALL BE PLANTED SO THAT THE ROOT CROWN IS PLANTED PER DETAIL ON THIS SHEET.
6. ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL ROOT WRAPPING MATERIAL MADE OF SYNTHETICS OR PLASTICS SHALL BE REMOVED AT THE TIME OF PLANTING. ALL TWINE OR ROPE SHALL BE REMOVED FROM AROUND CROWN OF TRUNK TO PREVENT GIRDELING OF TREE.
7. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE CONTAINER BALL SHALL BE CUT THROUGH THE SURFACE IN TWO VERTICAL LOCATIONS.
8. THE DAY PRIOR TO PLANTING, THE LOCATIONS OF ALL TREES AND SHRUBS SHALL BE STAKED FOR APPROVAL BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
9. THE LANDSCAPE CONTRACTOR SHALL REFER TO THE CONTRACT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
10. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE NEW PLANT MATERIAL THROUGH ONE CALENDAR YEAR FROM THE TIME OF PROVISIONAL ACCEPTANCE.
11. IF THERE IS A DISCREPANCY BETWEEN THE PLANS AND THE PLANT LIST, THE PLANS SHALL TAKE PRECEDENCE.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO THE OWNER.
13. STAKES AND GUY WIRES SHALL BE REMOVED AFTER ONE YEAR.
14. ALL EXISTING LANDSCAPING SHALL BE MAINTAINED DURING CONSTRUCTION. ANY MATERIAL DEEMED DEAD OR UNSATIFACTORY BY LANDSCAPE ARCHITECT WILL BE REPLACED EQUIVALENT IN SIZE AND SHAPE AT NO COST TO THE OWNER.
15. ALL EXISTING LANDSCAPING SHALL BE PRESERVED: NO SOIL STOCKPILING OR STRIPPING, NO EQUIPMENT OR MATERIAL STORAGE SHALL BE ALLOWED. AN ORANGE CONSTRUCTION FENCE SHALL BE CONSTRUCTED TO A DISTANCE OF NO LESS THAN 10 FEET OUTSIDE THE DRIP LINE OF THE EXISTING TREES. CONTACT LANDSCAPE ARCHITECT FOR ADDITIONAL INFORMATION.
16. DECORATIVE SIGNS, SPRINKLER SYSTEMS, TREES, LANDSCAPING MOUNDS, FENCES, LIGHT POLES, OR OTHER SUCH AMENITIES ARE NOT PERMITTED IN THE RIGHT-OF-WAY.
17. ALL BEDS TO HAVE SPADE EDGE.
18. ALL SEEDED/HYROSEEDED TURF AREAS SHAW HAVE WEED FREE STRAW APPLIED TO RETAIN MOISTURE.

PLANTING SCHEDULE

LEGEND	KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE / COND	REMARKS	MATURE HEIGHT / MATURE SPREAD
	TREES						
	AR	4	Acer x freemanii 'Jeffersred'	Autumn Blaze Maple	2–1\2" / B & B	Deciduous Canopy	50' / 45'
	GT	0	Gleditsia triacanthos inermis 'Skycole'	Skyline Honeylocust	2–1\2" / B & B	Deciduous Canopy	45' / 45'
	LS	0	Liquidambar styraciflua	Sweetgum	2–1\2" / B & B	Deciduous Native Canopy	50' / 45'
	PA	2	Picea abies	Norway Spruce	6'–7' / B & B	Evergreen Tree	60' / 40'
	SHRUBS						
	EA	13	Euonymus alatus	Burning Bush	36" / B & B	Deciduous Shrub	8'–10' / 8'
	JC	0	Juniperus chinensis 'Sea Green'	Sea Green Juniper	18"–24" / No. 3 cont.	Evergreen Shrub	3' / 5'–6'
	RM	0	Rosa 'Radcon'	Pink Knockout Shrub Rose	18"–24" / No. 3 Cont.	Deciduous Shrub	3' / 3'
	TO	0	Thuja occidentalis 'Woodwardii'	Woodward Arborvitae	24"–36" / No. 5 Cont.	Evergreen Shrub	4' / 4'
	VO	0	Viburnum dentatum 'Christom'	Blue Muffin Viburnum	36" / No. 5 Cont.	Deciduous Shrub	5' / 5'
	GRASSES AND PERENNIALS						
	PA	0	Pennisetum alopecuroides 'Hameln'	Hameln Fountain Grass	18"–24" / No. 2 Cont.	Ornamental Grass	30" / 24"

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REVISIONS

LANDSCAPING PLAN
Hillview Veterinary Clinic, LLC
1761 THORNBURG LANE, FRANKLIN, IN
NEEDHAM TOWNSHIP, JOHNSON COUNTY, INDIANA

C8.0-LSP.DWG
08.30.2021
DRAWING:
DATE:
21.018
PROJ. NO.:
B.OTT
DRAWN BY:
B.OTT
SURVEYED BY:
1"=20'
SCALE:

L&P

SHEET NO.:
C8.0