

## GENERAL NOTES

### PRE-CONSTRUCTION MEETING AND CONSTRUCTION COMMENCEMENT:

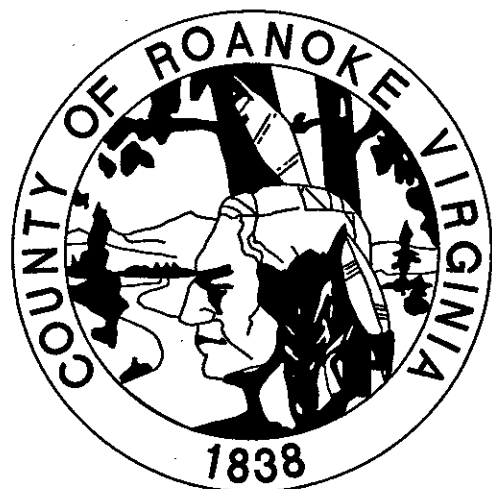
- All construction methods and materials shall conform to the Construction Standards and Specifications of Roanoke County, the Western Virginia Water Authority, and the Virginia Department of Transportation.
- Stormwater Management Agreements with an attached 8 1/2" x 11" or 8 1/2" x 14" plat must be approved and recorded prior to the pre-construction meeting.
- Once all required items are submitted to the County of Roanoke, the developer must contact the Development Review Coordinator to indicate that a pre-construction meeting needs to be scheduled. The pre-construction meeting will be scheduled with the owner/developer two (2) working days later.
- All land disturbing projects that require approval of an erosion and sediment control plan, grading or clearing permit shall require that the applicant provide the name of an individual who will be responsible for land disturbing activities and that this individual hold a Responsible Land Disturber (RLD) Certificate from the Department of Environmental Quality. The Responsible Land Disturber can be anyone from the Project team that is certified by the Commonwealth of Virginia to be in charge of carrying out the land disturbing activity for the project.
- It is the responsibility of the owner/developer to notify the certified Responsible Land Disturber and the Utility Contractor to attend the pre-construction meeting.
- The Development Review Coordinator will schedule the pre-construction meeting with the County Review Engineer, the County Inspector, and the Western Virginia Water Authority and the Town of Vinton Public Works Department if applicable.
- An approved set of plans, Storm Water Pollution Prevention Plan (SWPPP), VSMP coverage letter, and all permits must be available at the construction site at all times.
- The developer and/or contractor shall supply all utility companies with copies of approved plans, advising them that all grading and installation shall conform to approved plans.
- The project engineer will inform the owner/developer verbally and in writing of the County's obligation to perform inspections on site. Everyone in the meeting will be required to sign a pre-construction checklist indicating their knowledge of Roanoke County's obligation to perform inspections on site.
- The Erosion Control Permit or Combined Erosion Control & VSMP Permit is given to the developer at this pre-construction meeting.
- Notify the County of Roanoke prior to beginning installation of ESC measures. The County will inspect initial installations to ensure compliance with approved plan prior to start of grading. The developer SHALL contact the project inspector 24 hours before beginning any grading or construction on the property.
- County inspectors must inspect storm drain / stormwater management / BMP installations during the process of installation. Please contact the site inspector 24 hours in advance.
- All work shall be subject to inspection by Roanoke County, the Western Virginia Water Authority and the Virginia Department of Transportation inspectors.
- Contractors shall notify utilities of proposed construction at least two (2), but not more than ten (10) working days in advance. Area public utilities may be notified thru "Miss Utility": 1-800-552-7001 or VA 811.
- The 100 year Floodway shall be staked prior to any construction.
- Grade stakes shall be set for all curb and gutter, culvert, sanitary sewer and storm sewer at all times of construction.
- The Department of Community Development shall be notified when a spring is encountered during construction.
- Construction debris shall be containerized in accordance with the Virginia Litter Control Act. No less than one litter receptacle shall be provided on site.
- The contractor shall provide adequate means of cleaning mud from trucks and/or other equipment prior to entering public streets or rights of ways. It is the contractors responsibility to insure that the streets are in a clean, mud and dust free condition at all times.
- Plan approval in no way relieves the developer or contractors of the responsibilities contained within the erosion and sediment control or stormwater management policies.
- Field construction shall honor proposed drainage divides as shown on plans.
- Field corrections shall be approved by the Roanoke County Engineering Division and/or the Western Virginia Water Authority and the Professional of Record, prior to such construction.
- The developer or contractor shall supply the County and the Western Virginia Water Authority with correct As-Built plans before final acceptance.

### VIRGINIA DEPARTMENT OF TRANSPORTATION:

- Plan approval by Roanoke County does not guarantee issuance of any permits by the Virginia Department of Transportation.
- A permit must be obtained from the Virginia Department of Transportation, Salem Residency Office prior to construction in the highway right-of-way.
- The preliminary pavement designs should be based on a predicted sub-grade CBR value of 7.0 and with a Resiliency Factor (RF) of 2.0 as shown in Appendix I of the 2000 Virginia Department of Transportation Pavement Design Guide for Subdivision and Secondary Roads. The sub-grade soil is to be tested by an independent laboratory and the results submitted to the Virginia Department of Transportation prior to base construction. Should the sub-grade CBR value and/or the RF value be less than the predicted values, additional base material will be required in accordance with Departmental specifications. Refer to the same manual as the number and locations of the required soil samples to be tested. All pavement designs shall be submitted to the Department for review and approval. The sub-grade shall be approved by the Virginia Department of Transportation prior to placement of the base. Base shall be approved by the Virginia Department of Transportation for depth, template, and compaction before the surface is applied.
- Standard guardrail with safely end sections may be required on fills or in areas where hazards exist as deemed necessary. After completion of rough grading operations, the County Engineer and Virginia Department of Transportation shall be contacted to schedule a field review. Where guard rail is warranted, the standard shoulder width shall be provided and the guard rail shall be installed in accordance with the 2001 VDOT Road and Bridge Standards as part of this development.
- Standard street and traffic control signs shall be erected at each intersection by the developer prior to final street acceptance.
- All traffic devices shall be in accordance with current edition of the "Manual on Uniform Traffic Control Devices" (MUTCD).
- All unsuitable material shall be removed from the construction limits of the roadway before placing embankment.

See Sheet N/A for Stormwater Site Statistics Table.  
See Sheet N/A for New BMP Information Table.

The Project Engineer shall provide electronic copies of the approved plans to the Development Review Coordinator within 5 working days of the pre-construction meeting.  
The notes on this sheet shall not be modified.



# COUNTY OF ROANOKE, VA

NAME OF DEVELOPMENT	KOPPERS WATERLINE EXTENSION	OWNER/DEVELOPER I AM AWARE OF THE SITE DESIGN REQUIREMENTS IMPOSED BY THIS SITE DEVELOPMENT PLAN AND OTHER APPLICABLE ROANOKE COUNTY CODES. I HEREBY CERTIFY THAT I AGREE TO COMPLY WITH THESE REQUIREMENTS AND THE THIRTY (30) POINTS SHOWN ON THIS COVER SHEET UNLESS MODIFIED IN ACCORDANCE WITH LOCAL LAW.
MAGISTERIAL DISTRICT	CATAWBA	
OWNER	KOPPERS INDUSTRIES, INC. CONTACT: TRAVIS YEOMAN, PLANT MANAGER 4020 KOPPERS ROAD, SALEM VA 24153 MOBILE: 540-598-6501, OFFICE: 540-380-2061, FAX: 540-380-3517	
DEVELOPER	KOPPERS INC. CONTACT: TRAVIS YEOMAN, PLANT MANAGER 4020 KOPPERS ROAD, SALEM VA 24153 MOBILE: 540-598-6501, OFFICE: 540-380-2061, FAX: 540-380-3517	
ENGINEER AND SURVEYOR	PARKER DESIGN GROUP 2122 Carolina Ave, SW Roanoke, VA 24014 540-387-1153	CONTACT: SIMON RUTROUGH
TAX MAP NO(S)	055.03-02-08.00, 055.03-02-09.00	ZONE: I2 USE: INDUSTRIAL RAILROAD PRODUCTS

## WATER NOTES

All water facilities shall be constructed according to the Western Virginia Regional Design and Construction Standards (Latest Edition).

A minimum cover of three (3) feet is required over proposed lines.  
Contractor shall be responsible for locating and uncovering valve vaults after paving and adjustment to final grade if necessary.

All existing utilities may not be shown in their exact location. The contractor shall comply with the (State Water Works Regulations, Section 12VAC5-590-1150, where lines cross.)

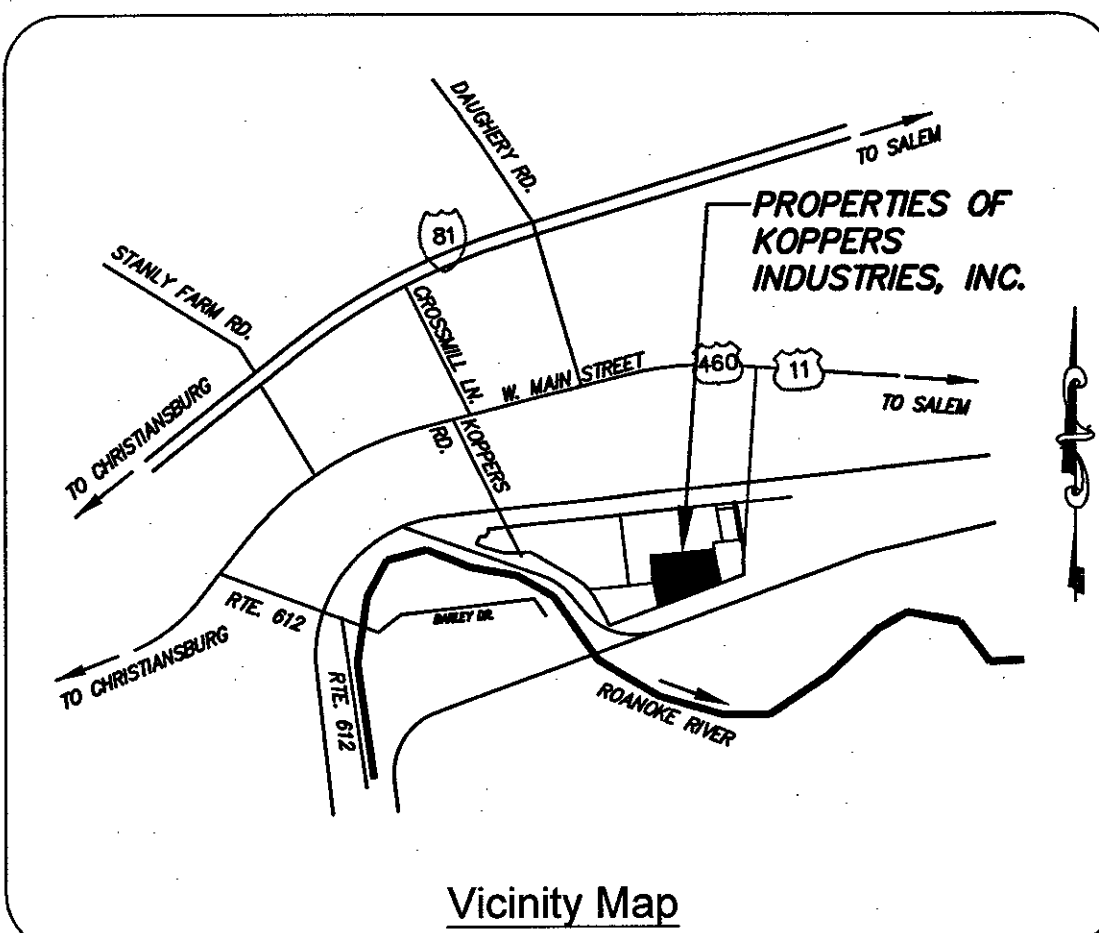
All trenches in existing or future highway right-of-ways shall be compacted according to Virginia Department of Transportation standards.

Lines shall be staked prior to construction.

Water main shall be minimum Class 350 Ductile Iron in accordance with AWWA C151 or DR-14 PVC in accordance with AWWA C-900.

Ductile Iron Pipe in accordance with the Western Virginia Regional Design and Construction Standards shall be required for all pipe with a working pressure equal to or greater than 100 p.s.i.

Western Virginia Water Authority  
Availability letter number: 17-328



Vicinity Map

## LEGEND

Property Line	---
Right-of-way	--- R/W ---
Centerline	--- CL ---
Minimum Building Line	--- MBL ---
Existing Storm Sewer	--- SD ---
Existing Sanitary Sewer	--- SS ---
Existing Water Main	--- W ---
Existing Contour	--- 1045 ---
Proposed Contour	--- 1045 ---
Proposed Drainage Divide	---<---
Proposed Limits of Clearing	--- 2' S.D. ---
Proposed Storm Sewer	--- S.D. ---
Proposed Sanitary Sewer	--- S.D. ---
Proposed Water Main	--- W ---
Hydrant	HYDRANT
Valve	VALVE
Blowoff	BLOWOFF

## SEWER NOTES

All sanitary sewer facilities shall be installed according to the Western Virginia Regional Design and Construction Standards (Latest Edition).

A minimum cover of three (3) feet is required over proposed lines.

Contractor shall be responsible for locating and uncovering all manholes after paving. Manhole tops shall be adjusted to grade if necessary.

All existing utilities may not be shown in their exact location. The contractor shall comply with (State Water Works Regulations, Section 12VAC5-590-1150, where lines cross.)

All trenches in existing or future rights-of-way shall be compacted according to Virginia Department of Transportation standards.

Lines shall be staked prior to construction.

## PRIVATE UTILITIES

Underground utilities installed on private property or in private utility easements and building related storm drains shall be designed and installed per the current edition of the Virginia Uniform Statewide Building Code. Design and installation requirements issued by the Western Virginia Water Authority that meet or exceed the USBC requirements are acceptable for private utilities. All private utilities are to be permitted through and inspected by the Roanoke County Inspections Office. Vaults, valves and other devices installed by or under the control of the Western Virginia Water Authority may not substituted for the code required devices.

- C01 COVER SHEET
- C02 EXISTING CONDITIONS & INITIAL ESC PLAN
- C03 OVERALL LAYOUT & ESC PLAN
- C04 WATERLINE RUN 1 LAYOUT & PROFILE
- C05 WATERLINE RUN 2 LAYOUT & PROFILE
- C06 WATERLINE RUN 3 LAYOUT & PROFILE
- C07 WATERLINE DETAILS & UTILITY NOTES
- C08 EROSION & SEDIMENT CONTROL NARRATIVE
- C09 EROSION & SEDIMENT CONTROL DETAILS

## Sheet Index

## SURVEY INFORMATION

Horizontal and vertical control surveys were performed in year: 2016  
By: PARKER DESIGN GROUP

All vertical elevations must be referenced to the National Geodetic Vertical Datum of 1929 or 1988.  
All horizontal elevations must be referenced to the North American Datum of 1927 or 1983.

Horizontal Datum: NAD '83 Vertical Datum: NAVD '88

Source of topographic mapping is dated: NOVEMBER 01, 2016

Boundary was performed by: PARKER DESIGN GROUP

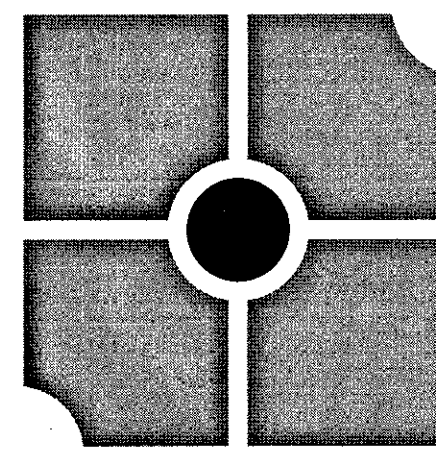
Benchmark Information: ELEVATIONS FROM GPS ESTABLISHED (NAVD'88)  
BENCHMARK = Bridge Spike 1079.07 - see plan for location  
BENCHMARK = Top of Nail 1076.14 - see plan for location  
BENCHMARK = Top of Nail 1073.70 - see plan for location

The professional seal and signature certifies the boundary survey and topographic mapping to be accurate and correct.

## QUANTITY & COST ESTIMATE

ITEM	QUANTITY	UNIT	UNIT PRICE	COST	BONDABLE
CLEARING AND GRUBBING		AC			
EXCAVATION		C.Y.			
EMBANKMENT		C.Y.			
CURB INLET DI-		EA			
CURB INLET DI-		EA			
MANHOLE MH-		EA			
MANHOLE MH-		EA			
-IN. CONCRETE PIPE, CLASS III		LF			
-IN. CONCRETE PIPE, CLASS IV		LF			
-IN. C.M. CULVERT		LF			
-IN. C.M. CULVERT		LF			
BOX CULVERT		LS			
PAVED SWALE		LF			
RIPRAP - CLASS		SF			
PERMANENT GRASS SWALE		LF			
-IN. CONCRETE ENDWALL EW-		EA			
-IN. END SECTION ES-		EA			
HEADER CURB & GUTTER CG-		LF			
CURB & GUTTER CG-		LF			
VALLEY GUTTER		EA			
GRAVEL BASE		SY			
GRAVEL SHOULDER		SY			
SURFACE TREATMENT		SY			
-IN. BIT. CONC. TYPE B-		SY			
-IN. BIT. CONC. TYPE S-		SY			
-IN. BASE MATERIAL		C.Y.			
-IN. SUBBASE MATERIAL		C.Y.			
TRAFFIC BARRICADE		EA			
8" WATER LINE		LF			
6" WATER LINE		LF			
COMMERCIAL METER VAULT W/ 8" FIRE AND 2" METER	1	EA	\$12000	\$12000	\$12000
8" WATER LINE (TO COMMERCIAL METER VAULT)	25	LF	\$50	\$1250	\$1250
4" WATER LINE (TO COMMERCIAL VAULT AND BYPASS)	25	LF	\$20	\$500	\$500
8" FITTINGS/VALVES (TEES, GATEVALVES, BENDS, ETC)	4	EA	\$300	\$1200	\$1200
4" FITTINGS/VALVES (TEES, GATEVALVES, BENDS, ETC)	5	EA	\$150	\$750	\$750
8" SANITARY SEWER		LF			
STANDARD MANHOLE W/FRAME & COVER		EA			
SAMPLING MANHOLE/PORT		EA			
LANDSCAPING		LS			
AMENITIES (INCLUDING BUT NOT LIMITED TO TRAILS, ETC..)		LS			
STORMWATER MANAGEMENT		LS			
AS-BUILT PLANS (STORM SEWER SYSTEMS)		LS			
AS-BUILT PLANS (STORMWATER MANAGEMENT)		LS			
10% CONTINGENCY				\$1570	\$1570
ESTIMATED TOTAL				\$17,270	\$17,270

BY SEALING THE PLANS, THE DESIGN PROFESSIONAL HEREBY CERTIFIES THAT THE FOREGOING ESTIMATE REFLECTS THE CURRENT IMPROVEMENT COSTS OF THIS PROJECT.



**parker**  
DESIGN GROUP  
ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS

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**Koppers Waterline Extension  
for Koppers Industries Inc.  
4020 Koppers Road  
Catawba Magisterial District  
Roanoke County, Virginia**

### REVISIONS:

DESIGNED BY: JPA  
DRAWN BY: JPA  
CHECKED BY: SLR  
SCALE: AS SHOWN  
DATE: 07 April 2017

SHEET TITLE:

## COVER SHEET

**C01**  
01 OF 09  
PROJECT NUMBER:  
16-0151-03



**APPROVED**

DEVELOPMENT PLAN APPROVED FOR CONSTRUCTION BY ROANOKE COUNTY	Date
Document	9/14/17
Development Review	9/14/17
Engineering	9/14/17
Water & Sewer	9/14/17
Planning & Zoning	9/14/17

**Koppers Waterline Extension  
for Koppers Industries, Inc.  
4020 Koppers Road  
Roanoke County, Virginia**

**SHEET**  
01  
OF  
09

CHARLES CRUSH  
AS-BUILT  
07-05-18

KOPPERS